

Close Out Documents

AP-49A – 2381 E 46th Ave.

Asbestos Abatement and Structural Demolition

Prepared for:

Kiewit Infrastructure Co.
Attn: Megan Wood
160 Inverness Drive West, Suite 110
Englewood CO 80112

Contents:

1. Closeout Letter
2. CDPHE Asbestos Abatement Permit
3. CDPHE Demolition Permit
4. JKS Asbestos Certifications
5. JKS Workers Asbestos Certifications
6. Project Design
 - a. SSAR
 - b. Asbestos Abatement Project Design
 - c. Pre-Demolition Engineering Survey
7. Asbestos Clearance Report
8. Materials Summary
9. Waste Manifests
 - a. Asbestos Waste Manifests
 - b. Regulated Building Materials (RBMs) Waste Manifests
10. Weight Tickets
 - a. Daily Load Trackers and Associated Truck Tickets
 - b. Waste Weight Tickets
11. Dump Diversion Summary
12. Containment Entry/Exit Log
13. Daily Logs

1. Closeout Letter

January 22, 2019

Kiewit Infrastructure Co.
160 Inverness Drive West, Suite 110
Englewood, CO 80112

Re: SSCR AP-49A 2381 E 46th Ave.

Dear Kiewit Infrastructure Co.

This letter is confirm that all the work associated with the asbestos abatement and demolition of the structure located at 2381 E 46th Ave. Denver, CO 80216, also referred as parcel AP-49A, is complete.

The scope of work included the removal of Regulated Building Materials (RBMs), asbestos abatement, demolition of a 612 square foot commercial structure, and the removal of the curb and driveway.

This document has been prepared to furnish you with key documents associated with this project for your records.

On behalf of the JKS Industries team, we would like to extend our appreciation to working with you on this project and look forward to working with you in the future.

Regards,



Jeffrey Knight,
President

2. CDPHE Asbestos Abatement Permit

Colorado Department of Public Health and Environment
Air Pollution Control Division – Indoor Environment Program – Asbestos/IAQ Unit
4300 Cherry Creek Drive South, APCD-IE-B1
Denver, Colorado 80246-1530
Phone: 303-692-3100 – Fax: 303-782-0278
E-mail: asbestos@state.co.us

ASBESTOS ABATEMENT PERMIT

This permit is granted subject to Colorado Air Quality Control Commission Regulation No. 8, Part B, adopted December 21, 2007, and effective January 30, 2008, the Colorado Air Pollution Prevention and Control Act (25-7-101 or 25-7-501 et seq., C.R.S.) and the following provisions. It is only for the purpose of allowing asbestos abatement.

ADDITIONAL PERMIT PROVISIONS:

By performing work under this permit the abatement contractor agrees that the Division may revoke or suspend this permit should the Division find that the contractor:

- has violated or has aided and abetted in the violation of 25-7-101 or 25-7-501 et seq., C.R.S. or Regulation No. 8, Part B, or an order of the Division or Commission,
- has failed to meet any permit and notification requirement or failed to correct any violations cited by the Division during any inspection within a reasonable period of time, as may be determined by the Division,
- has used misrepresentation or fraud in obtaining this permit, or,
- has committed any act or omission which does not meet generally accepted standards of the practice of asbestos abatement.

As a contractor, you may be subject to other licenses and permits, depending on the requirements of the county and municipality in which the work is being performed. The Colorado Department of Public Health and Environment, Air Pollution Control Division strongly suggests that you check with county and municipal authorities in order to determine any other local building/permitting requirements that must be met.

THE ORIGINAL PERMIT MUST BE POSTED ON SITE AT ALL TIMES.

Immediately notify the Asbestos/IAQ Unit of project modifications by fax (number above) or e-mail (address above) and the appropriate county health department by fax. Project modifications include changes in the scope of work or the scheduled work dates, etc.

This asbestos abatement permit is valid beginning 10/23/2018 through 11:59 PM on 10/22/2019.

The actual scheduled work dates are from 10/22/2018 through 10/24/2018.

Approval issued on: 10/25/2018

Record number: 142795

Notice Number: 18DE7238A-09

Variance: None

Comments: None

For the location specified below:

**AP-49 Gas store
Basement room 102
4605 Filmore St.
Denver
Denver County**

This permit has been issued to:

**JKS Industries, LLC
747 Sheridan Blvd Unit 9A
Lakewood, CO 80214**

Fee paid:

Check number:

Project Supervisor:

Andre M. Williams

Cerification No.: 15776

Project AMS:

Logan Greenfield

Cerification No.: 20715

Project Manager:

WAIVED

Certification No.: 15045

Issued by: CLB





Colorado Department
of Public Health
and Environment

ASBESTOS ABATEMENT NOTIFICATION and PERMIT APPLICATION FORM
FEE MUST ACCOMPANY THIS FORM. INCOMPLETE APPLICATIONS WILL BE RETURNED.

Single Family Residential Dwelling (SFRD) > 50 LF or 32 SF or a 55-gal. drum, but ≤ 260 LF or 160 SF or a 55-gallon drum	Public and Commercial Building, School, and Single-Family Residential Dwelling: > 260 LF or 160 SF or a 55-gallon drum
[code 200] <input type="checkbox"/> \$0	[code 100] <input type="checkbox"/> \$0
[code 205] <input type="checkbox"/> \$60	[code 105] <input type="checkbox"/> \$80
[code 210] <input type="checkbox"/> \$60	[code 110] <input type="checkbox"/> \$80
[code 230] <input type="checkbox"/> \$180	[code 130/232] <input type="checkbox"/> \$400
[code 290] <input type="checkbox"/> \$300	[code 190/292] <input type="checkbox"/> \$800
[code 265] <input type="checkbox"/> \$420	[code 165/267] <input type="checkbox"/> \$1200
[code 180/280] <input type="checkbox"/> \$55	[code 177] <input type="checkbox"/> \$80

Submit form to:
Permit Coordinator
Colorado Dept. of Public Health
and Environment
APCD-IE-B1
4300 Cherry Creek Drive South
Denver, CO 80246-1530
Phone: 303-692-3100
Fax: 303-782-0278
asbestos@state.co.us

Abatement Contractor		Abatement Site		Building Owner	
Company Name JKS Industries		Building Name AP-49A Gas Store		Owner Name CDOT	
Street Address 747 Sheridan Blvd. Unit 9A		Specify location in the building where work will take place (e.g. floor, room, wing, etc.) Basement Room 102		Contact Anthony Davito	
City Lakewood		Street Address 2381 E 46th Avenue		Street Address 2000 S. Holly St.	
State CO		City Denver		City Denver	
Zip code 80214		County Denver		State CO	
Telephone # (303) 238-0207		Building Contact Doug Messier		Telephone # (303) 512-5900	
Fax # (303) 238-0452		Call Phone # (817) 320-6749		Fax # ()	
Project Supervisor Andre Williams		CO. Cert # 15776			
Project Personnel					
CO Project Mgr. Name See Project Manager Waiver form from CDOT		Start Date 10/22/2018		End Date 10/24/2018	
Cell Phone # ()		Start Time 6:30am AM		End Time 5:00 PM	
CO Project Designer Name Daniel Beecke		Check the day(s) of operation: Su M Tu W Th F Sa			
Cell Phone # (303) 232-2660		Emergency? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>		Type of ACM: TSI, Texture, VAT, etc.	
CO Project Designer # (1947)		Linear Feet / Type		Square Feet / Type	
Registration # 15979		5 SF of Paper Duct Wrap		55 gal. Drums	
A.M.S. Name Logan Greenfield		City Aurora			
Cell Phone # (719) 545-0375		CO A.M.S. Cert # 20715		State CO	
		Zip code 80018			
Project Information					
Landfill Name Denver Arapahoe Disposal		Street Address 3500 South Gun Club Road			
Disposal Site					
CDPHE Use Only					
Postmark or Delivery date 10-2-18		Approved by: (Signature)			
Form of Payment & #		PM req'd? Y N (WB)			
Permit # 1038A-01		Date Issued: 10/05			

Please describe below the work practices and procedures to be employed in conducting the abatement of asbestos. **BE SPECIFIC.** Indicate type(s) of ACBM to be abated (e.g. VAT, ceiling tile, TSI, etc.). Use another page if necessary.

This Multi-Phase 9 project will consist in removal and disposal of 5 SF of paper duct wrap under a secondary Glovebag containment. The friable materials will be removed using small hand tools (carpenters hammer, cats claw, crow bar and chisels) the material will be kept wet (1500 psi airless sprayer with amended water). The material will be enclosed in a glovebag and a secondary containment, will employ negative air pressure, a two chamber decontamination with HEPA vacuum and wet rags. This work will be completed per the Appendix A small scale projects guide lines. All work will be in accordance with Colorado Regulation #8 Part B. The secondary glove bag containment will be inspected and cleared by a State Certified AMS.

APPROVED
DATE 10-16-18 DRIVE (Signature)
Rev. 01/30/2008

3. CDPHE Demolition Permit

Colorado Department of Public Health and Environment
Air Pollution Control Division – Indoor Environment Program – Asbestos/IAQ Air Unit
4300 Cherry Creek Drive South, APCD-IE-B1
Denver, Colorado 80246-1530
Phone: 303-692-3100 – Fax: 303-782-0278
E-mail: asbestos@state.co.us

DEMOLITION APPROVAL NOTICE

This approval notice is granted subject to Colorado Air Quality Control Commission Regulation No. 8, Part B, adopted December 21, 2007, and effective January 30, 2008 and the Colorado Air Pollution Prevention and Control Act C.R.S. (25-7-101 and 25-7-501 et seq). This notice signifies that the structure was inspected for asbestos, luminous exit signs (containing radioactive material), and Ozone-Depleting Refrigerants and the demolition contractor has properly notified the Colorado Department of Public Health and Environment pursuant to Regulation No. 8, Part B.

As a contractor, you may be subject to other demolition licenses and permits, depending on the requirements of the county and municipality in which the work is being performed. The Colorado Department of Public Health and Environment, Air Pollution Control Division, strongly suggests that you check with county and municipal authorities in order to determine any other local building/permitting requirements that must be met.

Please note that certain asbestos-containing materials (ACM) may remain in the structure during demolition. Therefore, any demolition debris left behind after the completion of post-demolition site cleanup may constitute a "reason to know of asbestos-contaminated soil" at the site, subject to the requirements of Section 5.5 of the Solid Waste Regulations (6 CCR 1007-2, Part 1).

THE ORIGINAL APPROVAL NOTICE MUST BE POSTED ON SITE AT ALL TIMES.

Immediately notify the Asbestos/IAQ Unit of project modifications by fax (number above) or e-mail (address above) and the appropriate county health department by fax. Project modifications include changes in the scope of work or the scheduled work dates, etc.

This demolition approval notice is valid beginning 11/7/2018.

The actual scheduled work dates are from 11/7/2018 through 1/7/2018.

Approval issued on: 11/7/2018

Record number: 143109

Notice Number: 18DE7415D

For the location specified below:

AP-49A Commerical

2381 E. 46th Ave

Denver

Denver County

Fee Paid: \$55.00

Check number: 5653

Asbestos Building Inspector:

Richard L. Ralston

Cerification No.: 4261

Inspection Date: 11/05/2018

This notice has been issued to:

JKS Industries, Inc.

747 Sheridan Blvd. Unit 9A

Lakewood, CO 80214

Issued by: TS





DATE 4/6/18 CDPHE DWP

Colorado Department of Public Health and Environment

DEMOLITION NOTIFICATION APPLICATION FORM
APPLICATION FEE MUST ACCOMPANY THIS FORM
INCOMPLETE APPLICATIONS WILL BE RETURNED

(Notice will be mailed to the demolition contractor unless specified otherwise)

Fee: \$50 + \$5 per 1000 ft² of area to be demolished = \$ 55.00
(See instruction #1 on reverse side)

Submit form to:
Permit Coordinator
Colorado Dept. of Public Health and Environment
APCD-IE-B1
4300 Cherry Creek Drive South
Denver, CO 80246-1530
Phone: 303-692-3100
Fax: 303-782-0278
Asbestos@state.co.us

Demolition Contractor: JKS Industries, 747 Sheridan Blvd. #9A, Lakewood, CO 80214. Demolition Site: AP-49A Commercial, 2381 E 46th Ave, Denver, CO 80216. Building Owner: CDOT, 2000 S Holly St., Denver, CO 80222. Certified Asbestos Inspector: Richard Ralston, 11/02/2018, 4261, 02/08/2019, (719) 225-6953. Building Owner or Contractor: Jeffrey Knight, 11/1/18. THIS BOX IS FOR CDPHE USE ONLY: Approved by DWP, Code: initial-310, Permit #: 18007415D, Record #: 43109, Date Issued: 11/06/18.

APPROVED
DATE 4/6/18 CDPHE DWP

4. JKS Asbestos Certifications



Colorado Department
of Public Health
and Environment

General Abatement Contractor

This certifies that

JKS Industries, LLC

GAC No.: 18531

has met the certification requirements of 25-7-507, C.R.S. and Air Quality Control Commission Regulation No. 8, Part B, and is hereby authorized to perform asbestos abatement activities in the state of Colorado.

Issued: July 18, 2018

Expires: July 18, 2019


Authorized/APCD Representative

SEAL

5. JKS Workers Asbestos Certifications

entra Medical Centers
19 Blvd COLORADO SPRINGS, CO 80916
19) 390-1727 Fax: (719) 390-9690
Surveillance - Asbestos

Colorado Department
of Public Health and
Environment



Supervisor



Asbestos Certification

Martha Yadira
Nahle

Expires: 4/16/2019 Cert. #: 18186

Date Issued: 4/16/2018

INTERNATIONAL



Environmental and Safety Training LLC
720 Billings Street Unit F
Aurora, Colorado 80011
Phone # (720) 859-3134
Fax # (720) 859-0660

CERTIFIES THAT

YADIRA NAHLE

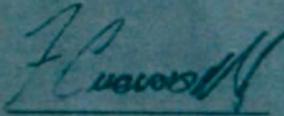
Has successfully completed
The EPA- APPROVED AHERA ANNUAL ASBESTOS REFRESHER
COURSE for **CONTRACTOR/SUPERVISOR**
And passed the requirements examination in that discipline

This course is EPA-Approved under Section 206 of the
Toxic Substance Control Act (TSCA)

Course Date 04/07/2018
No. Hours 8
Certificate No. CO040718-2BASR
Expires 04/07/2019

This course meets the
requirements of
AQCC Reg. #8 Part B




Training Director

EMPLOYER AUTHORIZATION AND INFORMATION FOR RESPIRATORY EVALUATION

EMPLOYER TO COMPLETE THE FOLLOWING

Employer Name: Mitchell Sales

Address _____

Employee SSN _____

- Check Type of Respirator(s) To Be Used (Check ALL that apply)
- Air-purifying (non-powered) Air-purifying (powered)
 - Atmosphere supplying Respirator
 - Combination air-line and SCBA
 - Continuous-Flow Respirator
 - Supplied-Air Respirator
 - Open Circuit SCBA Closed Circuit SCBA
 - Dust Mask 1/2 Face with Cartridges Full Face with Cartridges
- Make _____ Model _____ Cartridge _____

- Extent of Usage (Check ALL that apply)
- On a daily basis _____ Total Hours
 - Occasionally - but not more than twice a week _____ Total Hours
 - Rarely - or for Emergency situations only _____ Total Hours

- Expected Physical Effort Required (Check ALL that apply)
- Light Moderate Heavy

- Exposure to Hazardous Materials (Check ALL that apply)
- Arsenic Benzene
 - Coke Oven Cotton Seed / Dust
 - Cadmium Formaldehyde
 - Methylene Chloride Lead
 - Textiles Chromium

- Special Work Conditions (Check ALL That Apply When Wearing Respirator)
- High Places Enclosed Places Protective Clothing
 - Temperature Extremes Mostly Cold Mostly Hot
 - Other _____

Questionnaire will be: HAND CARRIED MAILED OTHER

EVALUATION AUTHORIZATION BY: _____
Signature of Employer Representative

DO NOT WRITE BELOW THIS LINE DO NOT WRITE BELOW THIS LINE

PLHCP¹ WRITTEN STATEMENT FOR RESPIRATORS (EMPLOYER)

PHYSICIAN WILL COMPLETE THE FOLLOWING

This report may contain confidential medical information and is intended for the designated employer contact only. The Americans with Disabilities Act (ADA) imposes very strict limitations on the use of information obtained during physical examination of qualified individuals with disabilities. All information must be collected and maintained on separate forms, in separate files, and must be treated as a confidential medical record, with the following exceptions:

- Supervisors and managers may be informed about necessary restrictions on the work or duties of an employee and necessary accommodations.
- First aid and safety personnel may be informed, when appropriate, if the disability might require emergency treatment.

Based upon my findings, I have determined that this individual (Check ALL that apply) _____ prior to respirator approval and usage.

- Employee must schedule a medical examination with _____
- Class I - No Restrictions on Respirator Use To be used for Emergency Response or Escape Only Other _____
- Class II - Some Specific Use Restrictions
- Class III - Respirator Use is NOT PERMITTED
- Further Testing / Evaluation is Required: 2
- Fit Test Required Fit Test Performed Satisfactorily
- Fit Test Performed Unsatisfactorily Fit Test NOT Performed at: _____
- Special prescription eyewear needed to accommodate respirator Special prescription eyewear needed to accommodate respirator
- Facial hair needs to be shaved to assure tight seal on certain face masks.
- Physician or other Licensed Healthcare Professional _____
- Employee must seek further medical evaluation by a private physician who must submit a report to _____

(Check ALL that apply)

- The above individual HAS been examined for respirator fitness in accordance with 29 CFR 1910.134. This limited evaluation is specific to respirator use only. Employees should be instructed to report any difficulties in using respirators or change of any physical status to their supervisor or physician. This evaluation included the Respiratory Questionnaire outlined in 29 CFR 1910.134.
- The above individual HAS NOT been examined by me for respirator fitness. The employee's medical evaluation consisted of a review of OSHA's Medical Evaluation Questionnaire in Appendix C Part A Section 2, in accordance with 29 CFR 1910.134. This limited evaluation is specific to respirator use only. Employees would be instructed to report any difficulties in using respirators or change of any physical status to their supervisor or physician. This evaluation included the Respiratory Questionnaire outlined in 29 CFR 1910.134.
- In accordance with specific OSHA requirements, I have informed the above named individual of the results of this evaluation and of any medical conditions resulting from exposure that may require further explanation or treatment. Where applicable, the above named individual has been informed of the increased risk of lung cancer attributable to the continued use of smoking and asbestos, lead and/or other chemical exposures.

Physician's Signature _____

Physician's Name (Printed) _____

Date of Exam 03/16/19

Expires On 03/16/19

Physician's License Number (Optional in Most States) _____

Print Date: 03/16/2018
Revision Date: 06/29/1998

1. altp. smt. resp. employer
The employer's file with a copy to the employee

Respirator Fit Test

I, Martha Nahle, acknowledge that I have been fit tested and trained for the proper use and care of my respirator. I have read and understand JKS's written respiratory program manual.

Date of Fit Test: 10-08-18 Fit Test Conductor: Geo Thomas

Respirator Information

- 1. Manufacturer: North
- 2. Model: 7700M
- 3. Size (Circle one): SMALL MEDIUM LARGE
- 4. Approval Number: TC-84A-0592

Irritant smoke used (Circle one)? YES NO

Please initial the following as each test is completed:

- MN Breathe normally through the respirator
- MN Breathe deeply through the respirator. Be certain that your breaths are deep and regular
- MN Turn your head from one side to the other to the fullest extent about every second without bumping the respirator on your shoulders. Ensure that your movement is complete. Inhale on each side.
- MN Nod your head up and down to the fullest extent about every second without bumping the respirator on your chest. Ensure that your movement is complete and can be completed quickly. Inhale when you are facing up.
- MN Do several jumping jacks to ensure that the respirator does not come loose from your face.
- MN Move your mouth to its fullest extent; for example, yawn, move your jaw around, etc. Ensure that you can move your mouth as necessary without compromising the fit of the respirator.
- MN Read the Rainbow Passage
When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. A rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch with its path high above and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach his friends say he is looking for the pot of gold at the end of the rainbow.

Employee Signature: Martha Nahle

Date: 10-8-18

Fit Test Conductor Signature: [Signature]

Date: 10-8-18

Colorado Department
of Public Health and
Environment



Worker



Asbestos Certification

Jean Carlos
Leccia-Coa

Expires: 6/20/2019 Cert. #: 24687
Date Issued: 6/20/2018

INTERNATIONAL

Environmental and Safety Training L.L.C.

720 Billings Street Unit F

Aurora, Colorado 80011

Phone # (720) 859-3134

Fax # (720) 859-0660



CERTIFIES THAT

JEAN CARLOS LECCIA COA

Has successfully completed

The **EPA- APPROVED AHERA ASBESTOS COURSE** for **WORKER**

And passed the requirements examination in that discipline

This course is **EPA-Approved** under Section 206 of the
Toxic Substance Control Act (TSCA)

Course Date 06/11/2018 - 06/14/2018

Exam Date 06/14/2018

No. Hours 32

Certificate No CO061418-07AWI

Expires 06/14/2019

This course meets the
requirements of
AQCC Reg. #8 Part B



Invalid without raised seal

Training Director

Midtown Occupational Health Services
2420 W. 26th Ave. Ste. 200-D Denver, CO 80211
Phone: (303) 831-9393 Fax: (303) 831-6335
OSHA Asbestos Certification

Applicants Name Jean Carlos Leccia

The above individual was seen by me on 6-18-78 in accordance to 29 CFR 1926.1101(Asbestos Certification) and 29CFR1910.134 (Respirator Certification). The following was performed:

1. Completion and review of the standardized medical questionnaire and work history with special emphasis directed to the pulmonary, cardiovascular, and gastrointestinal systems per Appendix D in 1926.1101
2. Reviewed the employer's description of this individual's duties as they relate to asbestos exposure, the anticipated exposure level, and the personal protective and respiratory equipment to be utilized by this individual.
3. Review of information from previous medical examinations, if available.
4. A physical examination with emphasis upon the pulmonary, cardiovascular, and gastrointestinal systems, including a pulmonary function test of forced vital capacity (FVC) and forced expiratory volume at one second (FEV-1).
5. Determined that a chest roentgenogram was was not required as part of this examination. (note according to CFR 1926.1101 (M)(2)(ii)(C) it is at the discretion of the physician whether or not a chest X-ray is required)
6. Reviewed OSHA's Medical Evaluation Questionnaire in Appendix C Part A Section 2 in accordance with 29CFR 1910.134 and have determined that this individual may may not use a respiratory device while performing his/her required duties.
7. The employee has been instructed to report any difficulties in using the respirators or any change of physical status to their supervisor or physician.
8. In accordance with OSHA requirements, I have fully explained the results of the medical examination and laboratory tests to the above named patient.
9. In accordance with OSHA I have informed this individual of the health risks involved with smoking, of the synergistic relationship between cigarette smoking and asbestos exposure in producing lung cancer, and that cessation of smoking will reduce the risk of lung cancer.

Midtown Occupational Health Services
2420 W. 26th Ave. Ste. 200-D Denver, CO 80211
Phone: (303) 831-9393 Fax: (303) 831-6335
OSHA Asbestos Certification

There is no detected medical condition which would place this employee at an increased risk of material health impairment from exposure to asbestos, and there are no recommendations.

Comments/ Limitations _____

Examining Provider *J. Raschbacher* Date 6/28/18
J. Raschbacher, M.D.

J. Raschbacher, M.D.
 Midtown Occupational
 Health Services, P.C.
 2490 W. 26th Ave., Bldg. A, Suite 300
 Denver, CO 80211
 303-831-9393

Midtown Occupational Health Services

2490 W 26th Avenue
 Building A, Suite 300
 Denver, CO 80211

Leclla Coa, Jean Carlos

ID: 1993 Age: 25 (5/12/1993)

Gender	Male	Height	71 in	Asthma	No
Ethnicity	Hispanic	Weight	274 lb	BMI	38.2
Smoker	No			COPD	--

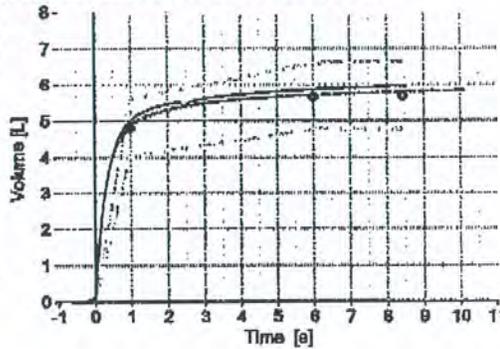
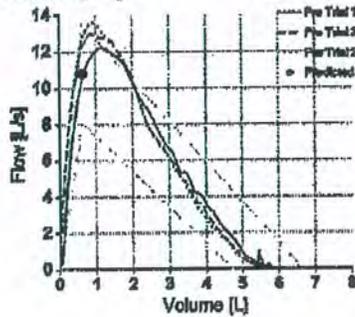
FVC (ex only)

Your FEV1 / Predicted: 104%

Test Date	6/18/2018 11:44:10 AM	Interpretation	--	Value Selection	Best Value
Post Time		Predicted	Hankinson (NHANES III), 1999	BTPS (IN/EX)	1.11/1.02

Parameter	Pred	LLN	Pre				%Pred
			Best	Trial 1	Trial 3	Trial 2	
FVC [L]	5.70	4.76	5.95	5.95	5.82	5.82	104
FEV1 [L]	4.81	4.02	5.01	5.01	4.86	4.81	104
FEV1/FVC [%]	84.5	75.4	84.1	84.1	83.4	82.6	100
FEF25-75 [L/s]	5.20	3.43	5.62	5.62	5.32	5.05	108
PEF [L/s]	10.82	8.09	13.62	12.23	12.95	13.62	126
FET [s]	-	-	8.4	8.4	10.2	10.1	-

Session Quality Pre C (FEV1 Var=0.15L (3.0%); FVC Var=0.19L (2.2%))



Respirator Fit Test

I, Juan Carlos Leccia Coa, acknowledge that I have been fit tested and trained for the proper use and care of my respirator. I have read and understand JKS's written respiratory program manual.

Date of Fit Test: 6/21/2018 Fit Test Conductor: Ruben Lopez

Respirator Information

- 1. Manufacturer: North
- 2. Model: 7700M
- 3. Size (Circle one): SMALL MEDIUM LARGE
- 4. Approval Number: TC-84A-0592

Irritant/smoke used (Circle one)? YES NO

Please initial the following as each test is completed:

- Breathe normally through the respirator
- Breathe deeply through the respirator. Be certain that your breaths are deep and regular
- Turn your head from one side to the other to the fullest extent about every second without bumping the respirator on your shoulders. Ensure that your movement is complete. Inhale on each side.
- Nod your head up and down to the fullest extent about every second without bumping the respirator on your chest. Ensure that your movement is complete and can be completed quickly. Inhale when you are facing up.
- Do several jumping jacks to ensure that the respirator does not come loose from your face.
- Move your mouth to its fullest extent; for example, yawn, move your jaw around, etc. Ensure that you can move your mouth as necessary without compromising the fit of the respirator.
- Read the Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. A rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch with its path high above and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach his friends say he is looking for the pot of gold at the end of the rainbow.

Employee Signature: [Signature]

Date: _____

Fit Test Conductor Signature: [Signature]

Date: 6/21/2018

Colorado Department
of Public Health and
Environment



Worker



Asbestos Certification

Ramira
Duran

Expires: 10/23/2019 Cert. #: 25056

Date Issued: 10/23/2018

INTERNATIONAL

Environmental and Safety Training L.L.C.

720 Billings Street Unit F

Aurora, Colorado 80011

Phone # (720) 859-3134

Fax # (720) 859-0660



CERTIFIES THAT

RAMIRA DEL VALLE DURAN MARQUINA

Has successfully completed

The **EPA- APPROVED AHERA ASBESTOS COURSE** for **WORKER**

And passed the requirements examination in that discipline

This course is **EPA-Approved** under Section 206 of the
Toxic Substance Control Act (TSCA)

Course Date 10/15/2018 - 10/18/2018

Exam Date 10/18/2018

No. Hours 32

Certificate No CO101818-07AWI

Expires 10/18/2019

This course meets the
requirements of
AQCC Reg. #8 Part B



Invalid without raised seal

Training Director

Midtown Occupational Health Services
 2420 W. 26th Ave. Ste. 200-D Denver, CO 80211
 Phone: (303) 831-9393 Fax: (303) 831-6335
OSHA Asbestos Certification

Applicants Name Ramira Duran

The above individual was seen by me on 10-19-18 in accordance to 29 CFR 1926.1101 (Asbestos Certification) and 29CFR1910.134 (Respirator Certification). The following was performed:

1. Completion and review of the standardized medical questionnaire and work history with special emphasis directed to the pulmonary, cardiovascular, and gastrointestinal systems per Appendix D in 1926.1101
2. Reviewed the employer's description of this individual's duties as they relate to asbestos exposure, the anticipated exposure level, and the personal protective and respiratory equipment to be utilized by this individual.
3. Review of information from previous medical examinations, if available.
4. A physical examination with emphasis upon the pulmonary, cardiovascular, and gastrointestinal systems, including a pulmonary function test of forced vital capacity (FVC) and forced expiratory volume at one second (FEV-1).
5. Determined that a chest roentgenogram was was not required as part of this examination. (note: according to CFR 1926.1101 (M)(2)(ii)(C) it is at the discretion of the physician, whether or not a chest X-ray is required)
6. Reviewed OSHA's Medical Evaluation Questionnaire in Appendix C Part A Section 2 in accordance with 29CFR 1910.134 and have determined that this individual may may not use a respiratory device while performing his/her required duties.
7. The employee has been instructed to report any difficulties in using the respirators or any change of physical status to their supervisor or physician.
8. In accordance with OSHA requirements, I have fully explained the results of the medical examination and laboratory tests to the above named patient.
9. In accordance with OSHA I have informed this individual of the health risks involved with smoking, of the synergistic relationship between cigarette smoking and asbestos exposure in producing lung cancer, and that cessation of smoking will reduce the risk of lung cancer.

Midtown Occupational Health Services
 2420 W. 26th Ave. Ste. 200-D Denver, CO 80211
 Phone: (303) 831-9393 Fax: (303) 831-6335
OSHA Asbestos Certification

There is no detected medical condition which would place this employee at an increased risk of material health impairment from exposure to asbestos, and there are no recommended limitations on the employee concerning the use of personal protective equipment or respirator.

There is a detected medical condition(s) which places this employee at an increased risk. See comments below for limitations:

Comments/ Limitations _____


 Examining Provider

10/17/18
 Date

Kirk Holmboe, D.O.
Midtown Occupational
Health Services, P.C.
 2490 W. 26th Ave., Bldg. A, Suite 300
 Denver, CO 80211
 303-831-9393

MIDTOWN OCCUPATIONAL HEALTH SERVICES

Respirator Fit Test

I, Raissa Duran, acknowledge that I have been fit tested and trained for the proper use and care of my respirator. I have read and understand JKS's written respiratory program manual.

Date of Fit Test: 10/24/2018 Fit Test Conductor: [Signature]

Respirator Information

- 1. Manufacturer: North
- 2. Model: 7700M
- 3. Size (Circle one): SMALL MEDIUM LARGE
- 4. Approval Number: TC-84A-0592

Irritant smoke used (Circle one)? YES NO

Please initial the following as each test is completed:

- Breathe normally through the respirator
- Breathe deeply through the respirator. Be certain that your breaths are deep and regular
- Turn your head from one side to the other to the fullest extent about every second without bumping the respirator on your shoulders. Ensure that your movement is complete. Inhale on each side.
- Nod your head up and down to the fullest extent about every second without bumping the respirator on your chest. Ensure that your movement is complete and can be completed quickly. Inhale when you are facing up.
- Do several jumping jacks to ensure that the respirator does not come loose from your face.
- Move your mouth to its fullest extent; for example, yawn, move your jaw around, etc. Ensure that you can move your mouth as necessary without compromising the fit of the respirator.
- Read the Rainbow Passage

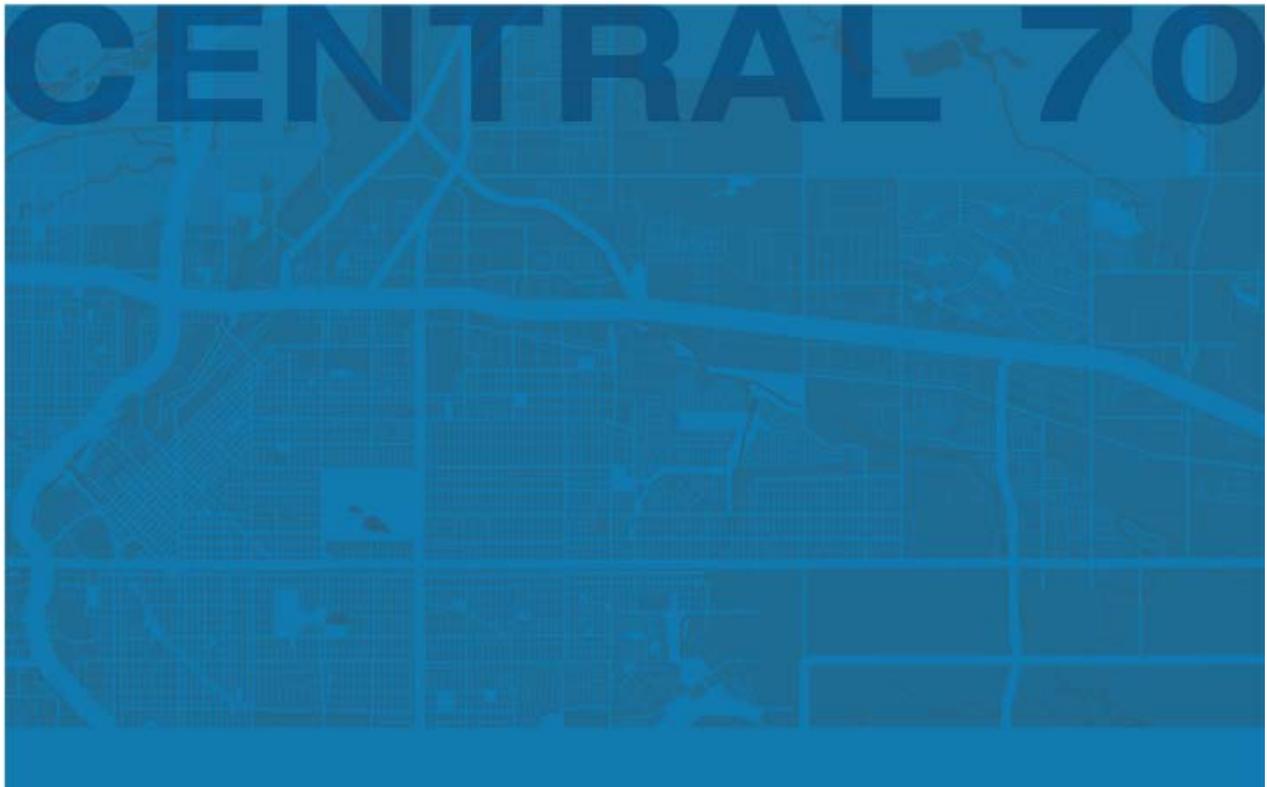
When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. A rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch with its path high above and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach his friends say he is looking for the pot of gold at the end of the rainbow.

Employee Signature: Raissa Duran
Fit Test Conductor Signature: [Signature]

Date: 10/24/18
Date: 10/24/2018

6. Project Design

6a. SSAR



June 25, 2018



Structure Survey Assessment Report AP-49A

2381 E. 46th Ave.

Denver, CO 80216

TABLE OF CONTENTS

Contents

1	Introduction	1
2	Site Survey Methodology	2
2.1	Asbestos Survey	2
2.2	Lead-Based Paint Survey	2
2.3	Survey Of Suspected RBMS.....	3
3	Findings	4
3.1	Asbestos Survey	4
3.2	Lead-Based Paint Survey	4
3.2.1	<i>TCLP Lead Analytical Results</i>	5
3.3	Regulated Building Materials Inventory Survey	5
4	Conclusions and Recommendations	6
4.1	Asbestos.....	6
4.2	Lead-Based Paint	6
4.3	Regulated Building Materials	7
5	Limitations	8
	Tables	9
	Figures	10

LIST OF REPORT ACRONYMS/ABBREVIATIONS

ACMs	Asbestos Containing Materials
ASHERA	Asbestos Hazard Emergency Response Act
APEC	All-Phase Environmental Consultants
AMS	Air Monitoring Specialist
CABI	Colorado Asbestos Building Inspector
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CFCs	Chlorofluorocarbons
CFR	Code of Federal Regulations
EP	Environmental Professional
EPA	Environmental Protection Agency
FAA	Flame Atomic Absorption
LBP	Lead Based Paint
LCP	Lead Containing Paint
mg/L	Milligrams per Liter
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NLC	Non-Lead Containing
NVLAP	National Voluntary Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated Biphenyls
PD	Project Designer
PEL	Permissible Exposure Limits
PLM	Polarized Light Microscopy
PPE	Personal Protective Equipment
ppm	Parts Per Million
RBM	Regulated Building Materials
RCRA	Resource Conservation and Recovery Act
RHMs	Recognized Hazardous Materials
SSAP	Structure Survey Assessment Plan
TC	Toxicity Characteristic
TCLP	Toxicity Characteristic Leaching Procedure
USEPA	U.S. Environmental Protection Agency
UWR	EPA Universal Waste Rule

LIST OF SAMPLING ACRONYMS/ABBREVIATIONS

BM	Brick/Mortar
CB	Cove Base
CC	Concrete
CER	Ceramic Block
CM	Ceramic Tile/Mortar
CMU	Concrete Masonry Unit/Mortar
CP	Carpet
CT	Ceiling Tile
D	Drywall (no surfacing)
DJ	Drywall/Joint Compound
F	Flooring
FT	Floor Tile
IN	Insulation
L	Linoleum
M	Mastic
MF	Multiple layered Flooring
MT	Mortar
PC	Popcorn Ceiling
PL	Plaster
PM	Panel/Mastic
R	Roofing
RF	Roof Flashing
S	Siding
ST	Stucco
T	Texture (no substrate)
TC	Textured Composite Board
TD	Textured Drywall
TSI	Thermal System Insulation
VB	Vapor Barrier
VP	Vent Paste (heating/cooling systems)
VW	Vent Wrap (heating/cooling systems)
WC	Window Caulk
WD	Wallpapered Drywall

Tables

Table 1-1	Project Details
Table 3-1A	Asbestos Containing Samples
Table 3-1B	Non-Asbestos Containing Samples
Table 3-2	Summary of Paint Chip Laboratory Analysis for Lead
Table 3-3	Summary of Regulated Building Materials

Figures

Figure 1	Site Location
Figure 2	Asbestos Bulk Sample Locations
Figure 3	Lead-Based Paint Sample Locations
Figure 4	Regulated Building Materials

Appendices

Appendix A	Asbestos, Lead Inspector and Laboratory Certifications
Appendix B	Positive Asbestos & Lead Sample Material Photographs
Appendix C	Laboratory Results & Chain of Custody – Asbestos
Appendix D	Laboratory Results & Chain of Custody – Lead & TCLP

APEC Project # 18-3066-015

Prepared for

Kiewit Meridiam Partners

Prepared by

Logan Greenfield
Logan Greenfield, CABI & AMS #20715
VP of Field Services

Reviewed by

Brandice Eslinger
Brandice Eslinger, EP, CABI & PD # 5494
President

1 Introduction

APEC was contracted to complete an environmental building survey for suspect ACMs, LBP, and RBM at 2381 E. 46th Ave., Denver, CO. This survey will identify which materials will need to be abated or removed prior to the future demolition activities.

Table 1-1 Project Details

Client Name:	Kiewit Meridiam Partners
Site Location:	2381 E. 46 th Ave., Denver, CO 80216
Building Type	Commercial Building
Building Size	Building is approximately 291 square feet
Construction Date:	1952 – Based on the City and County of Denver Assessor Information
Building Uses:	Commercial
Types of Materials to be Disturbed/Description of Proposed Disturbances:	Client intends to demolish the structure. All building materials will be impacted.

This Structure Survey Assessment was conducted as part of the Central 70 Project located in Denver, Colorado. This assessment was conducted in accordance with the SSAP, dated March 27, 2018. The SSAP, as defined in Section 23132 of Schedule 17 (Environmental Requirements) of the final Central 70 Project Agreement between CDOT and Kiewit Meridiam Partners, identifies the procedures for completing building and structure surveys for ACMs, LBP and universal wastes or other RHMs, as defined by the RCRA; universal waste, as defined by the USEPA and 6 CCR Part 273 of the Colorado Hazardous Waste Regulations; CFCs, as defined by the Clean Air Act; and PCBs, as defined by the Toxic Substances Control Act.

2 Site Survey Methodology

2.1 ASBESTOS SURVEY

On May 17, 2018, APEC certified personnel Logan Greenfield conducted an asbestos survey for demolition at the aforementioned address. The asbestos survey (inspection/sampling) was completed in accordance with the SSAP and follows guidelines established under the EPA's AHERA program and as required by USEPA regulation 40 CFR Part 61, NESHAP. Bulk sampling of suspected ACMs were conducted in strict accordance with AHERA sampling procedures detailed in 40 CFR 763.86. These include but aren't limited to labeling each sample, recording on a chain-of-custody, taking a photo of the sample and recording the location on a site diagram. Demolition work could disturb materials that contain asbestos and put unprotected workers at risk, violating asbestos regulations, which are enforced by the OSHA, the EPA, the CDPHE, and the Denver County Health Department. All samples were collected and submitted to EMSL Analytical, Inc. in Denver, CO per APEC chain-of-custody protocol. The laboratory is a member of NVLAP and is qualified to perform the required analysis (Appendix A). The analysis conducted was the EPA Interim Method for the Determination of Asbestos in Bulk Samples, using standard PLM and dispersion staining as established in 40 CFR Part 763.

This inspection report and methodology complies with the CDPHE Asbestos Sampling and Report Requirements Memorandum dated February 28, 2018.

2.2 LEAD-BASED PAINT SURVEY

On May 17, 2018, APEC certified personnel Rick Ralston conducted the LBP survey. The survey was conducted to evaluate the absence and/or presence of LBP or LCP that will be impacted during future demolition activities. The survey consisted of reviewing and inspecting the interior, exterior, and roof system of the structure for suspect LBP or LCP. The testing method was the use of a heat gun and/or scraping a portion of the paint to the substrate (material under the paint). Proper Chain of Custody procedures were followed and samples were sent to EMSL Analytical, Inc. in Cinnaminson, NJ, via Fed Ex. The samples were analyzed by total lead (percent by weight) via FAA by EPA Method 7420. EMSL is accredited under the American Industrial Hygiene Association's Environmental Lead Proficiency Analytical Testing program. LBP, according to the EPA, is defined as paint that contains lead in concentrations greater than 1.0 milligrams per square centimeter (mg/cm²) as measured with an XRF or 5000 ppm when measured by weight, or 0.5 percent by weight.

A total of 7 homogeneous paint color variations of suspect LBP areas were identified. One paint chip sample was collected from each suspect homogeneous area and submitted to the laboratory for analysis. Representative photographs of LBP and/or LCP were taken and are included in the photographic log (Appendix B). The paint chip sample locations were recorded and are included on the sample location drawing (Figure 3). Descriptions of the suspect homogeneous materials and a list of the collected samples are described in the 'Findings' section.

Based on the analytical results for the 7 samples, a TCLP sample was analyzed by collecting a representative sample (approximately 105 grams) of combined suspect building materials. The sample results are located in Appendix D.

2.3 SURVEY OF SUSPECTED RBMS

On May 17, 2018, APEC personnel conducted the RBM inventory consisting of inspecting the interior, exterior and roof system. The inspection was conducted to visually identify and quantify any building materials, devices and equipment suspected of containing potentially regulated materials as they pertain to the EPA UWR requirements (40 CFR, Part 273). APECs inventory review consisted of the following: potential mercury-containing thermostats/switches; fluorescent light tubes and compact fluorescent bulbs; items potentially containing PCBs (generally ballasts found within the fluorescent light fixtures); tritium powered exit signs; smoke detectors potentially containing Americium-241; and Freon-containing refrigeration systems. The survey of suspected RBMs are for use by contractors conducting the removal of items from the property. Samples of suspect RBMs are not required for this type of survey, as all determinations are made by visual means.

Although not a “regulated material”, things such as gas meters, electrical meters and electrical panels are listed with the RBM inventory. These materials will require removal and/or disconnection prior to demolition and until done so should be handled with care.

3 Findings

3.1 ASBESTOS SURVEY

A total of 43 bulk samples, plus 2 duplicate samples, were collected from 14 suspect homogenous materials throughout the structure, and the results of the PLM analysis are presented in Table 3-1A and Table 3-1B. The following samples are positive for ACMs (i.e. present greater than 1%):

Regulated Asbestos Containing Materials (RACM)

- AP49A-R2-VW7A, AP49A-R2-VW7Q, AP49A-B-VW7B & AP49A-B-VW7C – Vent Wrap observed only in room 2 and can be viewed from the basement

Non-regulated Asbestos Containing Materials

- AP49A-EX-R14A, AP49A-EX-R14B & AP49A-EX-R14C – Roofing material - the mastic between the bottom layer and middle layer roofing

Point Counts

Point count analysis occurs for samples with <1% of asbestos. Point count analysis was not performed because there were no samples analyzed by PLM containing <1% asbestos. The laboratory analytical report is included as Appendix C.

Duplicate Samples

For quality assurance purposes, duplicate samples are taken approximately every 20th sample, per the EPA “pink book” that is used by Colorado Regulation 8 for sampling protocol. Duplicate samples are listed as a duplicate (Q) in the sample location column of Table 3-1A or Table 3-1B. Two samples were collected because total of 43 samples were obtained.

- AP49A-R2-VW7Q
- AP49A-EX-RF13Q

3.2 LEAD-BASED PAINT SURVEY

A total of 7 homogeneous paint color variations were analyzed for the presence of LBPs and LCPs (Table 3-2; Figure 3). Under EPA 40 CFR Part 745, LBP is defined as any paint or surface coating that contains lead equal to or exceeding 0.5% (by weight), while LCP is defined as any paint or surface coating containing lead greater than or equal to 0.06% up to 0.5% (by weight). Caution should be taken during demolition to minimize cutting, abrading, or otherwise causing an air disturbance to this material and work must be completed in accordance with the OSHA Lead in Construction Standard (29 CFR 1926.62).

One lead sample (AP49A-EX-L-6) was found to be greater than 0.06% by weight and less than 0.5% by weight and is considered LCP (Table 3-2). The remaining 6 samples were less than the LCP and LBP thresholds, and are considered NLC. The laboratory analytical report is included in Appendix D.

3.2.1 TCLP LEAD ANALYTICAL RESULTS

Since one sample analyzed as a LCP, TCLP analysis of lead was performed. TCLP analysis simulates the potential for the demolished building materials to leach lead if placed in the landfill and results of the analysis determine if the materials will be considered hazardous waste. TCLP analysis was performed for landfill compliance and the TC maximum concentration is 5 mg/L. The results of the TCLP analysis is <0.40 mg/L, which is below the regulated limit and therefore not considered hazardous. The analytical report is included in Appendix D.

3.3 REGULATED BUILDING MATERIALS INVENTORY SURVEY

Several suspect RBMs were visually identified throughout the structure. RBMs that are a cause of concern, when discovered, are discussed in Section 4.3. A complete list of the RBMs is presented in Table 3-3, and selected locations of the RBMs are depicted in Figure 4.

4 Conclusions and Recommendations

4.1 ASBESTOS

Approximately 5 square feet of RACM was identified as vent wrap located around the furnace supply vent in room 2 and can be viewed in the basement. This material will require abatement prior to demolition of the structure because this is easily rendered friable.

Approximately 290 square feet of tar impregnated mastic on the roofing main deck was confirmed to be an ACM. This material is a Category I Non-friable ACM. Per NESHAP and Regulation 8, the structure can be demolished without abatement of this ACM. However, best management practices must be implemented to ensure that these materials are not rendered friable during the demolition process.

No other ACM was identified throughout the structures; however, if additional suspect materials not sampled during this investigation are identified during demolition, they should either be assumed to be ACM or should be sampled prior to disturbance.

Prior to demolition activities, all friable and non-friable (that can or will be rendered friable) ACM that may be impacted during the demolition must be abated by a Colorado Certified Asbestos Abatement Contractor as required by NESHAP and the CDPHE – Air Pollution Control Division: Asbestos. The exception are Category I & II Non-Friable ACMs that can, with best management practices, remain during the activities and remain non-friable, (i.e. not able to be reduced to a dust). Activities such as grinding, excessive munching of materials, sawing, jack-hammering, etc. are strictly prohibited.

According to AHERA, EPA, and the CDPHE, materials testing at less than (<) or equal to 1% asbestos fibers are not considered to be an ACM. However, any materials containing asbestos still need to be regulated. OSHA protocol must be followed when handling materials containing ANY amount of asbestos. Proper PPE and engineering controls must be utilized if these materials will be impacted during demolition activities.

4.2 LEAD-BASED PAINT

Lead was detected at concentrations above the LCP threshold in 1 of the 7 samples. The remaining 6 samples are considered NLC. Although LCP was identified in the samples analyzed, the TC limit of 5 mg/L was not exceeded in the TCLP lead analysis. No lead abatement is required prior to demolition.

TCLP results confirmed that the waste stream is not hazardous with respect to lead content.

While the TCLP results indicate that the waste stream is not characteristically hazardous with respect to lead content, LCP and LBP are still present in the building materials. Therefore, the contractor responsible for demolition of this structure is notified with receipt of this report of the presence or potential presence of LCP and/or LBP in the building materials that comprise the building. The contractor should also notify their employees of the presence of LCP or LBP prior to any disturbance and make the US Department of Labor OSHA publication number 3142-12R 2004 available to their workers. (“Lead in Construction”, <http://www.osha.gov/Publications/osha3142.pdf>). The standards address topics such as PELs for workers, exposure assessment, protection of employees during assessment of exposure, employee notification, PPE, medical surveillance, along with other topics related to working with LCP and LBP.

4.3 REGULATED BUILDING MATERIALS

Materials found during the regulated materials inventory within the building may require special handling or disposal prior to demolition activities. If abatement is needed, APEC recommends that the asbestos contractor or general contractor selected by the client properly dispose of these regulated materials, per applicable regulations.

With regards to RBMs, if listed, it is likely that the ballasts in the fluorescent light fixtures do contain PCBs. Where a manufacturer's label is present indicating “no PCBs”, the ballast can be disposed of with recyclable metal or with other municipal waste. During removal for disposal as part of the demolition activities, each ballast should be visually inspected for the manufacturer's label indicating “no PCBs”. If the label does not have this notation, the ballast should be considered PCB-containing and should be disposed of as a hazardous waste in accordance with local, state, and federal regulatory guidelines. Refrigerators and air conditioning units contain freon, which will need to be reclaimed or taken to a facility capable of this activity. Mercury containing thermostats will need to be disposed of at a facility certified to take this type of material. The contractor should also carefully remove all associated fluorescent light tubes and compact fluorescent lights and recycle or dispose of these materials according to applicable regulations.

This inspection was primarily relevant to the Federal UWR requirements under 40 CFR 273. It should be noted that contractors submitting bids for removal of the RBMs should verify quantities, conditions, and locations of all RBMs prior to bid submittals and initiating demolition activities. The contractor is also responsible for proper recycling and/or disposal of the RBMs, and should follow all federal, state and local regulations when handling these materials.

5 Limitations

This Structure Survey Assessment Report was prepared by All-Phase Environmental Consultants, Inc., at the request of and for the sole benefit of Kiewit Meridiam Partners, or any entity controlling, controlled by, or under common control with Colorado Department of Transportation. APECs certified inspectors used reasonable diligence and professional judgement to identify all suspect asbestos-containing materials, lead based paint, and regulated building materials in the property. APEC will not be held liable for property damage or any loss of property value due to the inspection. This report is not an abatement plan and is intended to be informational only; APEC will not be held responsible for the mishandling of the information contained herein.

APEC utilized destructive inspection methods in performing this survey, however accessibility may have been a limiting condition. If additional impacted suspect materials are discovered during related work for which there are no sample documentation/results, APEC recommends pursuing one of the following alternatives: Sample and analyze the discovered suspect material(s) to determine whether it contains asbestos, lead or other regulated materials; or assume the material(s) to be containing, quantify and remove on a unit cost basis.

Notwithstanding any provision to the contrary, the total liability of "All Phase Environmental Consultants, Inc.", and its employees, officers or directors be liable in contract, tort, strict liability warranty or otherwise, for any special, incidental or consequential damages, such as but not limited to, delay, disruption, loss of product, loss of anticipated profits or revenue, damages, cost, and expenses, including attorney's fees, shall not exceed the aggregate amount paid to All Phase Environmental Consultants, Inc. under this Agreement regardless of the legal theory under which such liability is imposed.

Tables

Table 3-1A	Asbestos Containing Samples
Table 3-1B	Non-Asbestos Containing Samples
Table 3-2	Summary of Paint Chip Laboratory Analysis for Lead
Table 3-3	Summary of Regulated Building Materials

Table 3-1A Positive Asbestos Containing Samples

Sample Name	Sample Location	Lab Results/ Asbestos Type	Detection Method(s)	Condition	Material Description	Material Location	NESHAP Classification	Estimated Quantity (Sq. ft.)
AP49A-R2-VW7A	ROOM 2	VENT WRAP 65% CHRYSOTILE	PLM	Good	VENT WRAP	VENTS IN ROOM 2 AND CAN BE VIEWED IN THE BASEMENT	RACM	5
AP49A-R2-VW7Q		VENT WRAP 65% CHRYSOTILE	PLM	Good			RACM	
AP49A-B-VW7B	BASEMENT	VENT WRAP 65% CHRYSOTILE	PLM	Good			RACM	
AP49A-B-VW7C		VENT WRAP 65% CHRYSOTILE	PLM	Good			RACM	
AP49A-EX-R14A	EXTERIOR	MASTIC 5% CHRYSOTILE	PLM	Good	ROOFING	ROOFING-TAR IMPREGNATED MASTIC ON MAIN DECK	CAT I	290
AP49A-EX-R14B		HOMOGENEOUS TO SAMPLES AP49A-EX-R14A & AP49A-EX-R14C						
AP49A-EX-R14C		MASTIC 5% CHRYSOTILE	PLM	Good	ROOFING	ROOFING-TAR IMPREGNATED MASTIC ON MAIN DECK	CAT I	290

ND=Non-Detect
 PLM=Polarized Light Microscopy
 NA=Not Applicable
 RACM=Regulated Asbestos Containing Materials

Table 3-1B Non-Asbestos Containing Samples

Sample Name	Sample Location	Lab Results/ Asbestos Type	Detection Method(s)	Condition	Material Description	Material Location	NESHAP Classification
AP49A-R1-PL1A	ROOM 1	ND	PLM	Good	KNOCKDOWN TEXTURED PLASTER	WALLS AND CEILINGS OF ROOMS 1&3	NA
AP49A-R3-PL1B	ROOM 3	ND	PLM	Good			NA
AP49A-R3-PL1C		ND	PLM	Good			NA
AP49A-R3-PL1D		ND	PLM	Good			NA
AP49A-R2-TD2A	ROOM 2	ND	PLM	Good	KNOCKDOWN TEXTURED DRYWALL	WALLS OF ROOM 2&3	NA
AP49A-R3-TD2B	ROOM 3	ND	PLM	Good			NA
AP49A-R3-TD2C		ND	PLM	Good			NA
AP49A-R4-PL3A	ROOM 4	ND	PLM	Good	SMOOTH TEXTURED PLASTER	WALLS AND CEILINGS OF ROOM 4	NA
AP49A-R4-PL3B		ND	PLM	Good			NA
AP49A-R4-PL3C		ND	PLM	Good			NA
AP49A-R2-PL4A	ROOM 2	ND	PLM	Good	ROUGH TEXTURED PLASTER	WEST WALL OF ROOM 2, EAST WALL OF ROOM 3 AND WALLS AND CEILINGS OF THE STAIRWELL	NA
AP49A-R3-PL4B	ROOM 3	ND	PLM	Good			NA
AP49A-SW-PL4C	STAIRWELL	ND	PLM	Good			NA
AP49A-R3-CC5A	ROOM 3	ND	PLM	Good	GREEN CONCRETE	FLOOR OF ROOM 3	NA
AP49A-R3-CC5B		ND	PLM	Good			NA
AP49A-R3-CC5C		ND	PLM	Good			NA
AP49A-B-VB6A	BASEMENT	ND	PLM	Good	CONCRETE VAPOR BARRIER	BASEMENT	NA
AP49A-B-VB6B		ND	PLM	Good			NA
AP49A-B-VB6C		ND	PLM	Good			NA

Sample Name	Sample Location	Lab Results/ Asbestos Type	Detection Method(s)	Condition	Material Description	Material Location	NESHAP Classification
AP49A-SW-CMU8A	STAIRWELL	ND	PLM	Good	CMU/MORTAR	EXTERIOR STRUCTURAL WALLS	NA
AP49A-R2-CMU8B	ROOM 2	ND	PLM	Good			NA
AP49A-SW-CMU8C	STAIRWELL	ND	PLM	Good			NA
AP49A-EX-BM9A	EXTERIOR	ND	PLM	Good	BRICK/MORTAR	EXTERIOR WALLS	NA
AP49A-EX-BM9B		ND	PLM	Good			NA
AP49A-EX-BM9C		ND	PLM	Good			NA
AP49A-R3-L10A	ROOM 3	ND	PLM	Good	FLOORING-MULTI	FLOOR OF ROOM 3	NA
AP49A-R3-L10B		ND	PLM	Good			NA
AP49A-R3-L10C		ND	PLM	Good			NA
AP49A-EX-WG11A	EXTERIOR	ND	PLM	Good	WINDOW GLAZING	WINDOWS	NA
AP49A-EX-WG11B		ND	PLM	Good			NA
AP49A-EX-WG11C		ND	PLM	Good			NA
AP49A-EX-ST12A	EXTERIOR	ND	PLM	Good	STUCCO	EXTERIOR WALLS	NA
AP49A-EX-ST12B		ND	PLM	Good			NA
AP49A-EX-ST12C		ND	PLM	Good			NA
AP49A-EX-RF13A	EXTERIOR	ND	PLM	Good	ROOF FLASHING	ROOF	NA
AP49A-EX-RF13B		ND	PLM	Good			NA
AP49A-EX-RF13Q		ND	PLM	Good			NA
AP49A-EX-RF13C		ND	PLM	Good			NA

ND=Non-Detect
 PLM=PolarizedLight Microscopy
 NA=Not Applicable

Table 3-2 Summary of Paint Chip Analysis for Lead

Sample Number	Sample Location	Lead Concentration (% wt.)	Component	Paint Description	Classification
AP49A-R3-L-1	Room 3	<0.0080	Plaster	Purple	NLC
AP49A-R3-L-2	Room 3	<0.0080	Behind Gray Paint	Tan	NLC
AP49A-R3-L-3	Room 3	<0.0080	Plaster	Gray	NLC
AP49A-BASE-L-4	Basement	<0.0080	Plaster	Off-White	NLC
AP49A-EX-L-5	Exterior	0.040	Guard Poles	Multi colored	NLC
AP49A-EX-L-6	Exterior	0.091	Roof Metal	Multi colored	LCP
AP49A-EX-L-7	Exterior	0.027	Plaster	White	NLC

Table 3-3 Summary of Regulated Building Materials

Room	Material	Location	Quantity Fixture/Bulbs each
Room 4	Thermostat-digital	Room 4	1
Basement	Electrical Main/Panel	Basement	1
Basement	Furnace	Basement	1
Exterior	Fluorescent Lights/Ballast	East Side of House	3 Fixtures/4 Bulbs

Figures

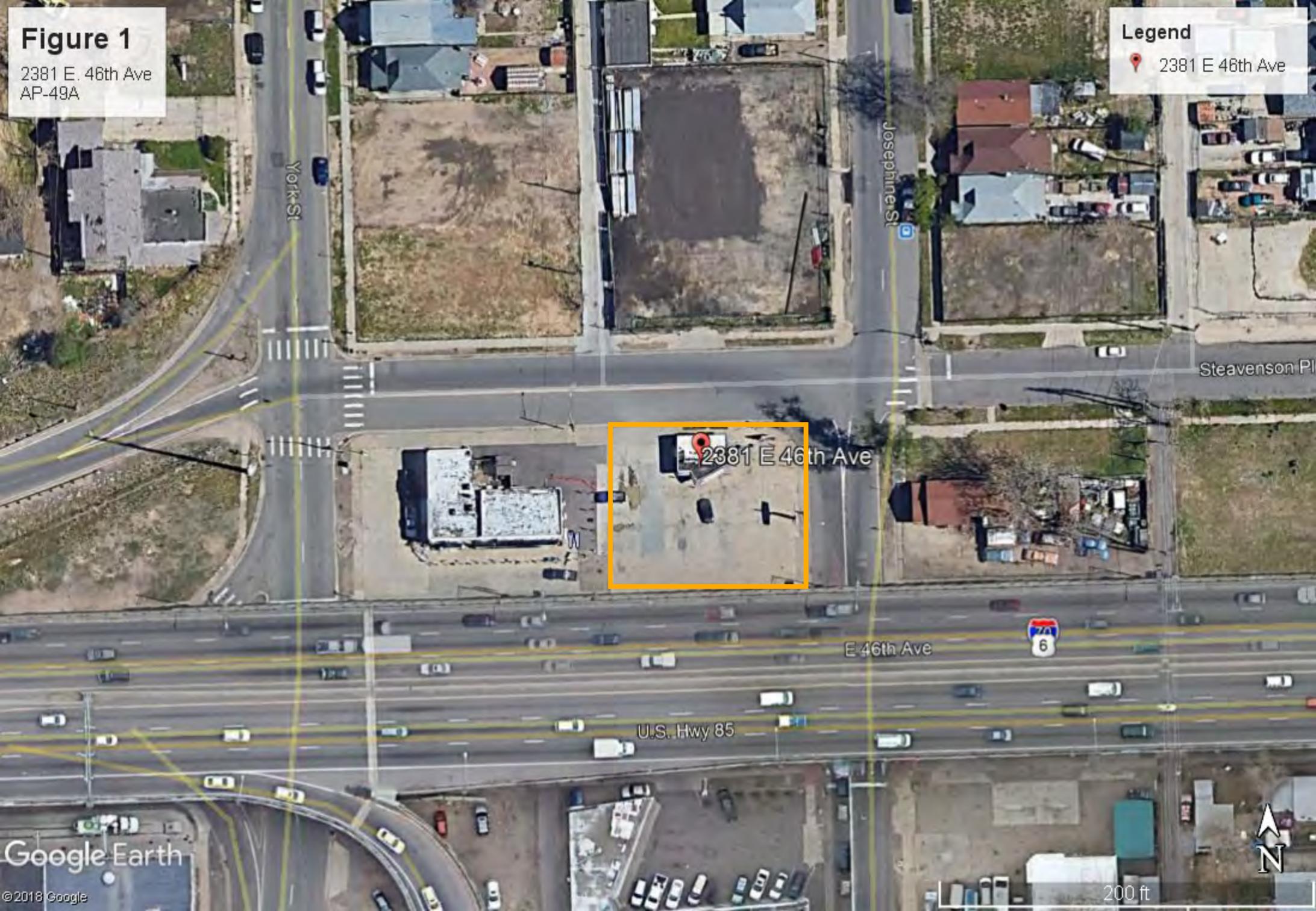
- Figure 1 Site Location
- Figure 2 Asbestos Bulk Sample Locations
- Figure 3 Lead-Based Paint Sample Locations
- Figure 4 Regulated Building Materials

Figure 1

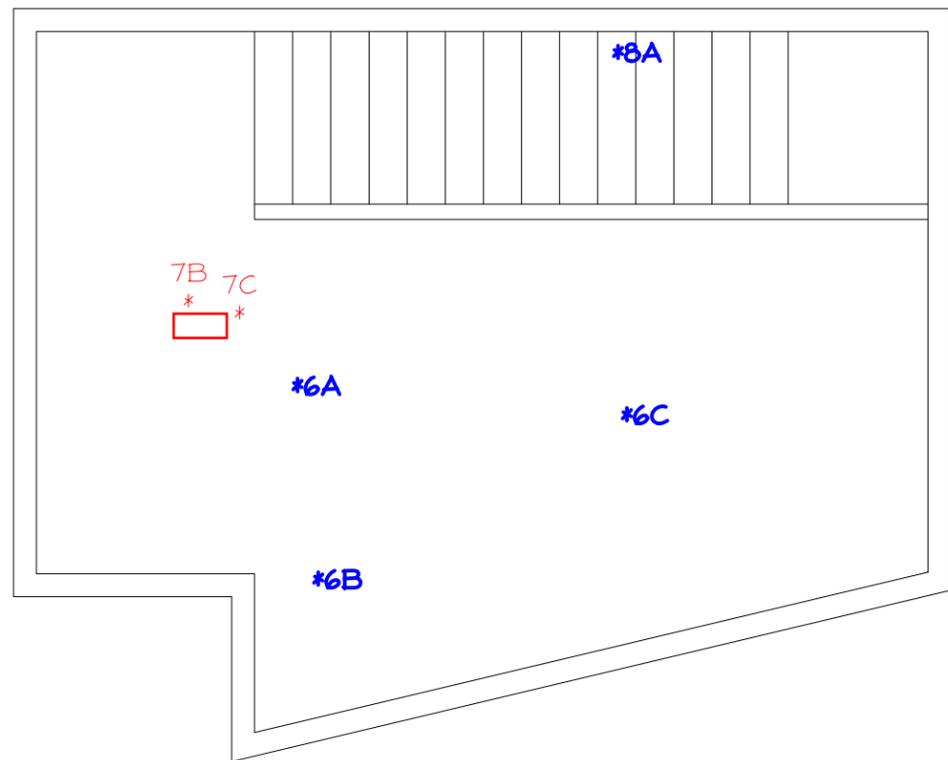
2381 E. 46th Ave
AP-49A

Legend

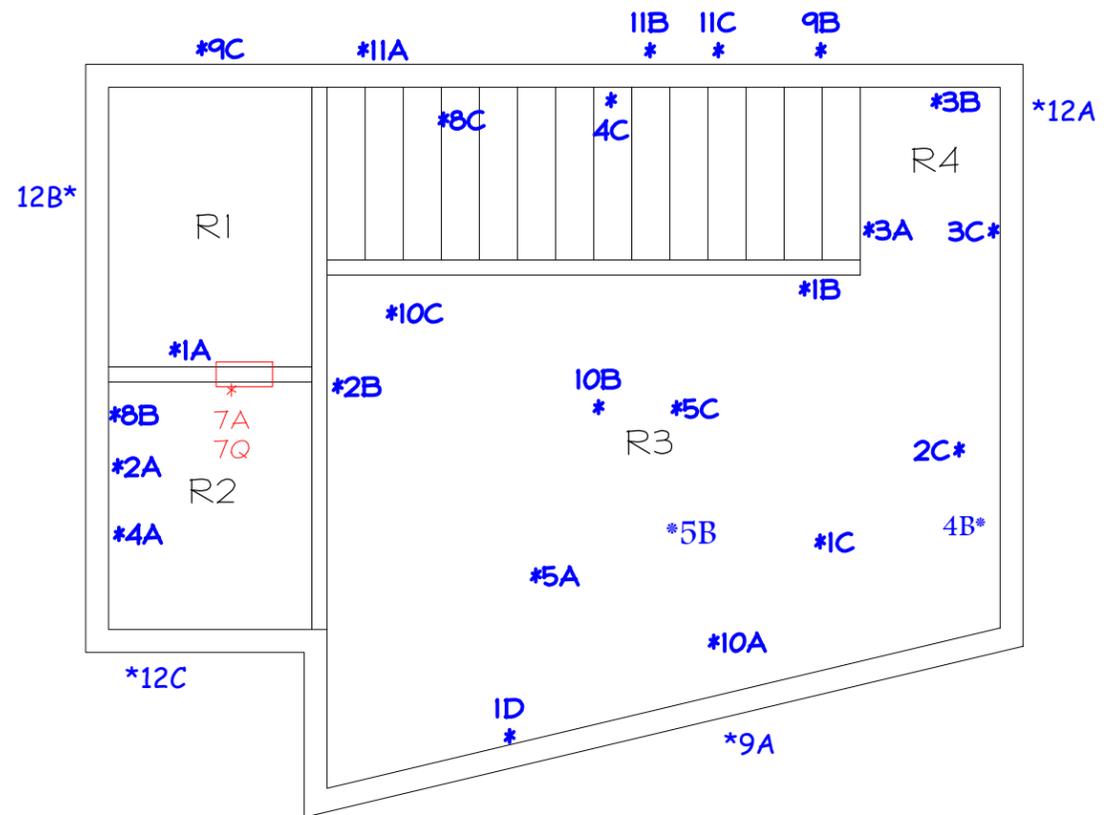
 2381 E 46th Ave



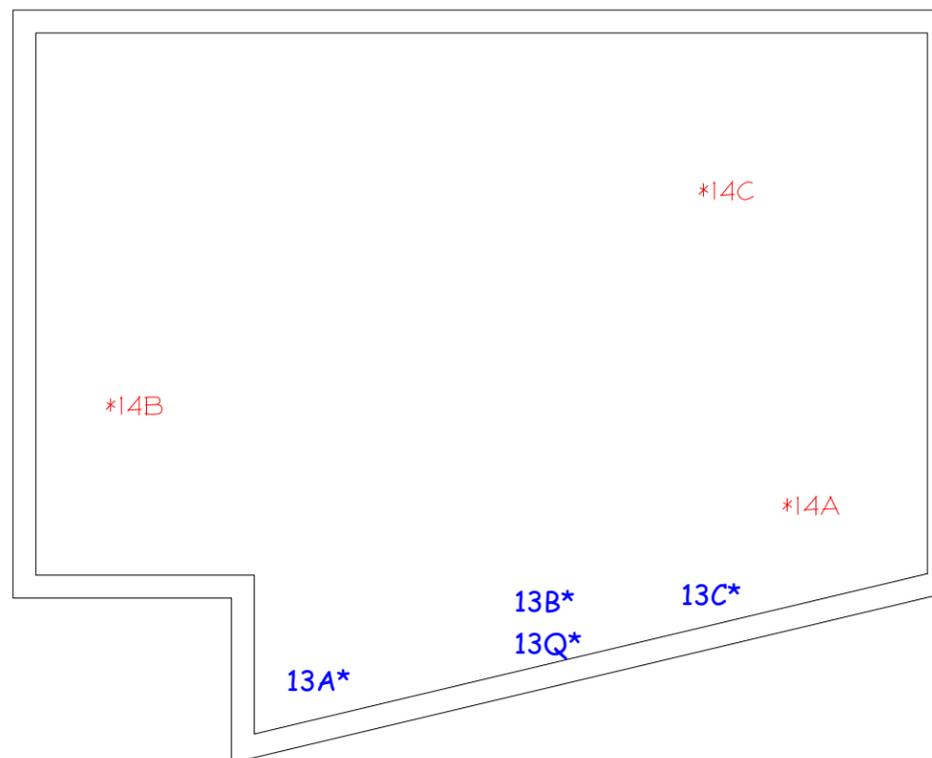
200 ft



BASEMENT



MAIN FLOOR



ROOF

- R1 = Room Numbers
- 4B = Asbestos Samples (Detect)
- 4B = Asbestos Samples (Non-Detect)
- = Vent Boot Wrap Positive for Asbestos

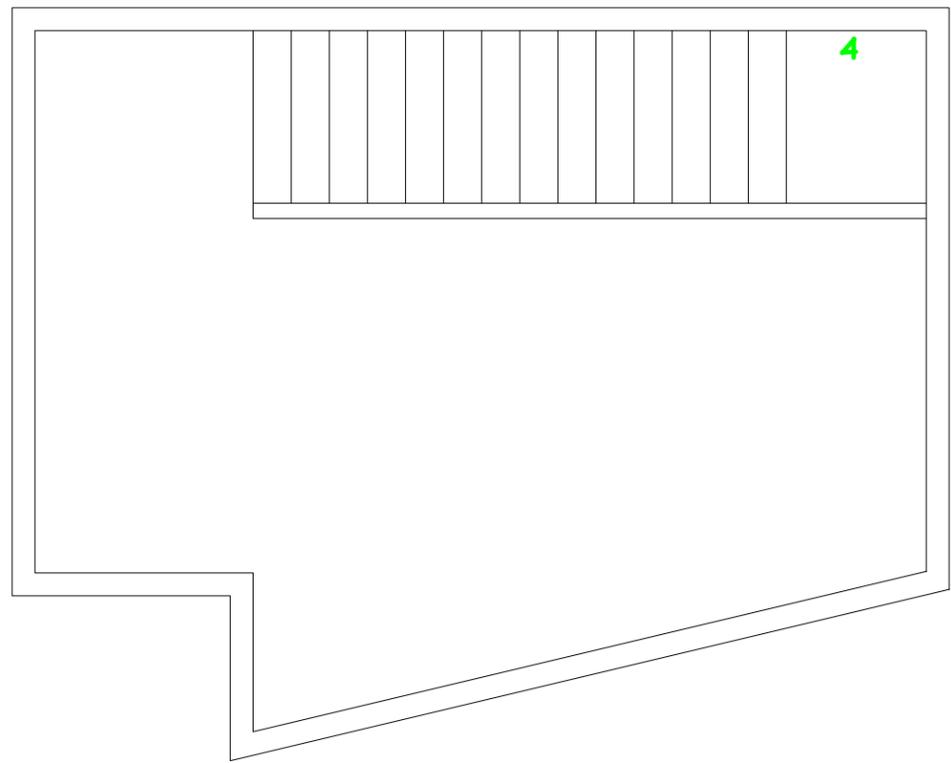


DR BY: R.A.
 APPROVED: B.N.E.
 SCALE: 1/4" = 1'-0"

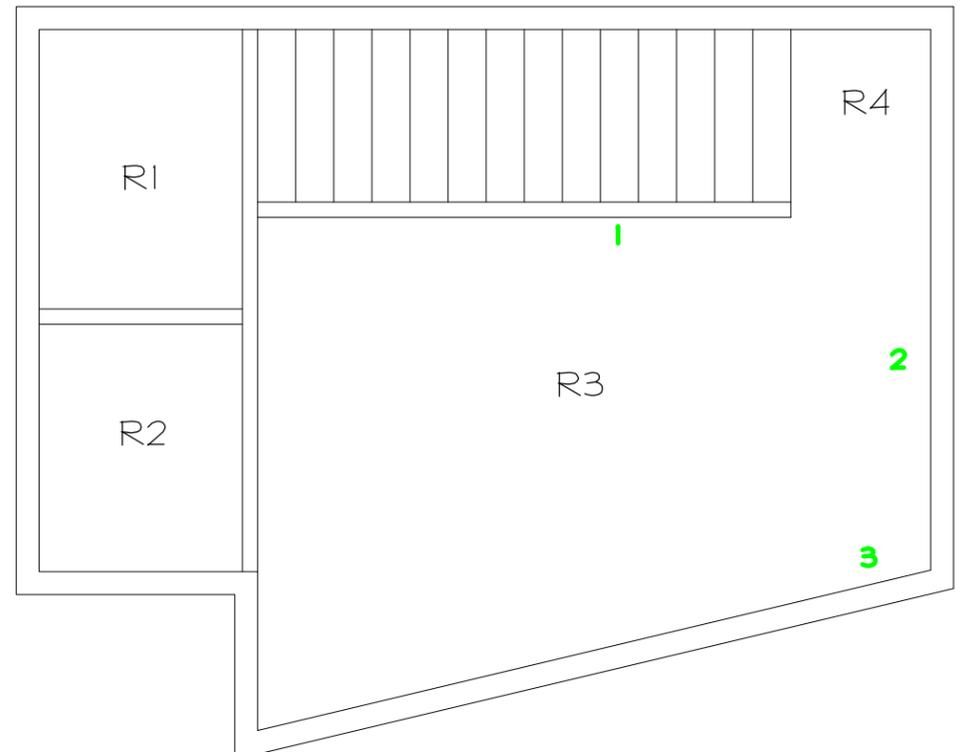
FIGURE 2 - Asbestos Bulk Sample Locations
 CENTRAL 70 - Structure Survey Assessment Map
 AP-49A
 2381 E. 46th Ave., Denver, CO
 May 17, 2018
 APEC #: 18-3066



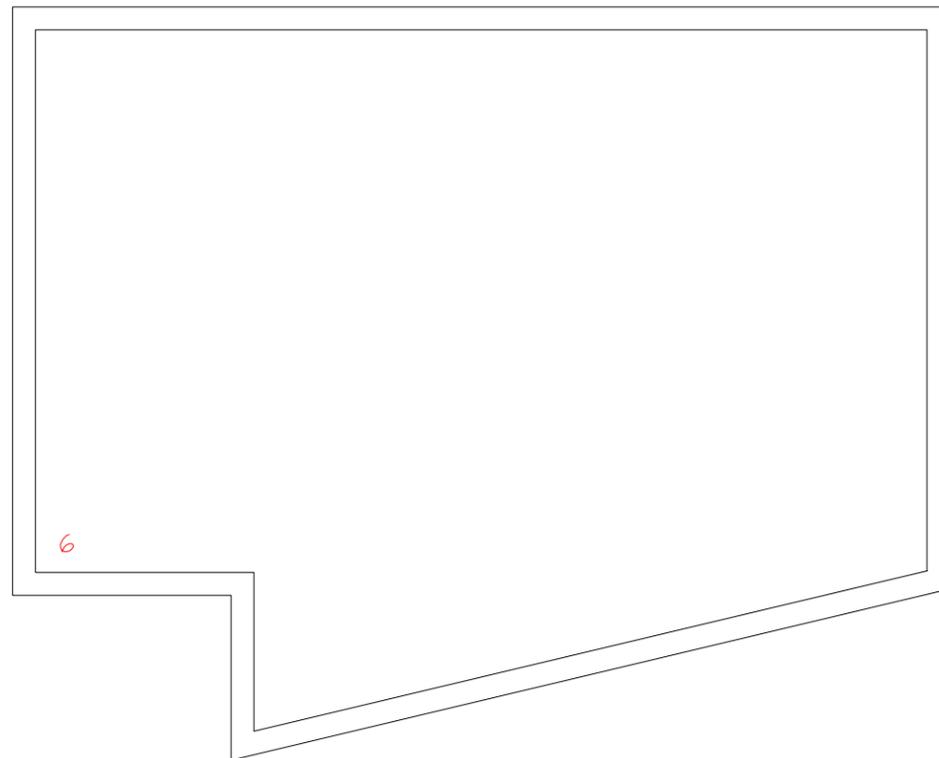
ALL-PHASE
 ENVIRONMENTAL CONSULTANTS, INC.
 721 W 9TH STREET
 Pueblo, CO 81003 Ph: (719) 545-0375



BASEMENT



MAIN FLOOR



ROOF

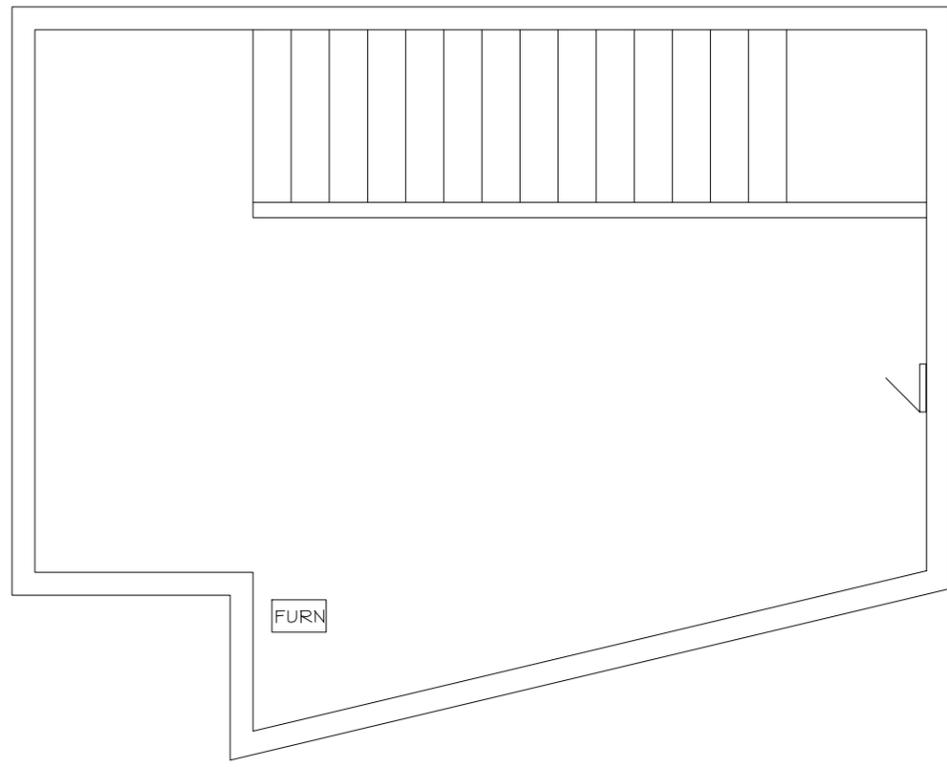


DR BY: R.A.
 APPROVED: B.N.E.
 SCALE: 1/8" = 1'-0"

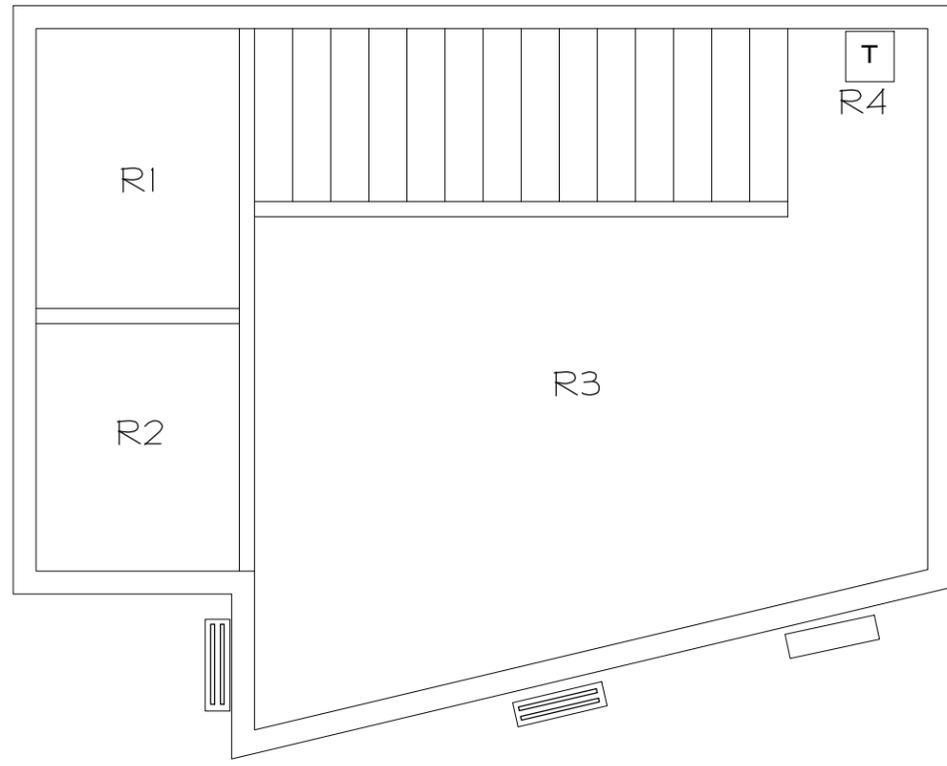
- R1 = Room Numbers
- 4 = Lead Base Paint (Detect)
- 4 = Lead Containing Paint (Detect)
- 4 = Lead Base Paint (Non-Detect)

FIGURE 3 - Lead Based Paint Sample Location
CENTRAL 70 - Structure Survey Assessment Map
AP-49A
 2381 E. 46th Ave., Denver, CO
 May 17, 2018
 APEC #: 18-3066

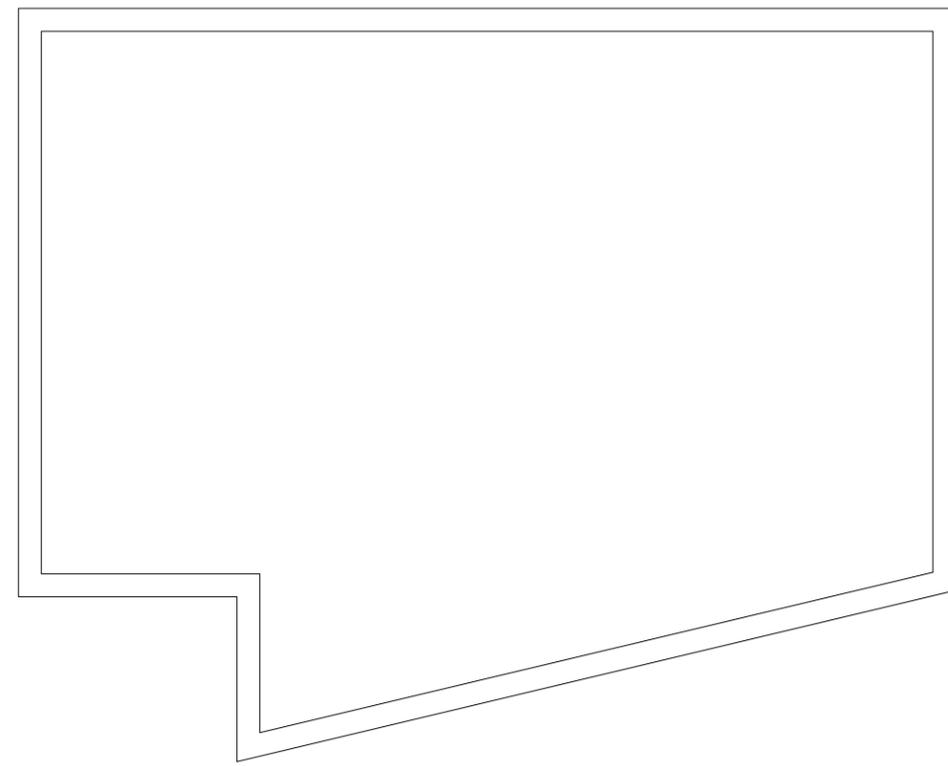
ALL-PHASE
 ENVIRONMENTAL CONSULTANTS, INC.
 721 W 9TH STREET
 Pueblo, CO 81003 Ph: (719) 545-0375



BASEMENT



MAIN FLOOR



ROOF

- RI = Room Numbers
- FURN = Furnace
- T = Thermostat
- = Breaker Panel
- = 2 Bulb Fluorescent Lights
- = NO Bulb Fluorescent Lights



DR BY: R.A.
 APPROVED: B.N.E.
 SCALE: 1/8" = 1'-0"

FIGURE 4 - Regulated Building Materials
 CENTRAL 70 - Structure Survey Assessment Map
 AP-49A
 2381 E3 46th Ave., Denver, CO
 May 17, 2018
 APEC #: 18-3066



ALL-PHASE
 ENVIRONMENTAL CONSULTANTS, INC.
 721 W 9TH STREET
 Pueblo, CO 81003 Ph: (719) 545-0375

A

ASBESTOS, LEAD AND
LABORATORY CERTIFICATIONS





Colorado Department
of Public Health
and Environment

ASBESTOS CERTIFICATION*

This certifies that

Logan Greenfield

Certification No.: 20715

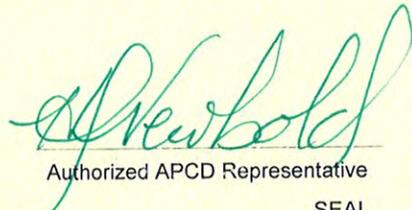
has met the requirements of 25-7-507, C.R.S. and Air Quality Control
Commission Regulation No. 8, Part B, and is hereby certified by the
state of Colorado in the following discipline:

Building Inspector*

Issued: October 18, 2017

Expires: October 18, 2018

** This certificate is valid only with the possession of a
current Division-approved training course certification
in the discipline specified above.*


Authorized APCD Representative
SEAL



Colorado Department
of Public Health
and Environment

ASBESTOS CERTIFICATION*

This certifies that

Logan Greenfield

Certification No.: 20715

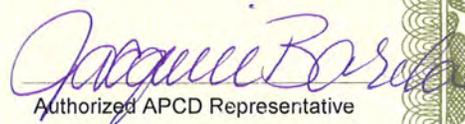
has met the requirements of 25-7-507, C.R.S. and Air Quality Control
Commission Regulation No. 8, Part B, and is hereby certified by the
state of Colorado in the following discipline:

Building Inspector*

Issued: September 13, 2018

Expires: October 18, 2019

** This certificate is valid only with the possession of a
current Division-approved training course certification
in the discipline specified above.*


Authorized APCD Representative

SEAL



1775 West 55th Avenue
Denver, CO 80221
303.410.4941
trainingchc.com



Certifies that

Logan Greenfield

20715

*Has Successfully Completed the EPA- Approved Annual Asbestos Refresher Training Course
Under Section 206 of the Toxic Substance Control Act (TSCA), Title II.*

BUILDING INSPECTOR

Course Date: September 20, 2017
Certificate No.: R17-1661-AI-CO
No. of Hours: 4
Expiration Date: September 20, 2018
Certification not valid without watermark

A handwritten signature in black ink that reads "Frank Hulce".

Frank Hulce - Instructor

A handwritten signature in black ink that reads "Danaya Benedetto".

Danaya Benedetto- Training Program Manager



CHC Training
 Nationwide Training & Certification Experts

www.chctraining.com
 303.412.6360
 855.60.CERTIFY

1775 West 55th Avenue
 Denver, CO 80221,
 United States of America

CERTIFICATE OF ACHIEVEMENT

This certificate is awarded to:

LOGAN GREENFIELD

In recognition of satisfactory completion of the EPA-approved annual asbestos
 refresher training course under section 206 of the Toxic Substance Control Act (TSCA),

Title II entitled:

BUILDING INSPECTOR

COURSE DATE:

SEPTEMBER 12, 2018

EXPIRATION DATE

SEPTEMBER 12, 2019

COURSE HOURS:

4.0

Danaya N. Benedetto

CEO & Training Program Manager

Credential License ID:
 11943552

Daniel R. Beaver

Instructor

CHC Training Certificate No.
 R18-1729-AI-CO



Verify this Credential



Visit our Website





Colorado Department
of Public Health
and Environment

LEAD-BASED PAINT CERTIFICATION*

This certifies that

Richard L. Ralston

Certification No.: 9130

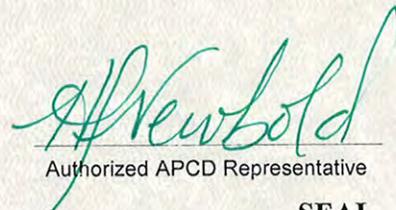
has met the requirements of 25-7-1104, C.R.S. and Air Quality Control
Commission Regulation No. 19, and is hereby certified by the state of
Colorado in the following discipline:

Risk Assessor*

Issued: February 10, 2017

Expires: February 10, 2019

** This certificate is valid only with the possession of a valid
lead-based paint training certificate in the discipline specified
above, issued by either a Colorado approved training provider,
an EPA approved training provider, or a training provider
approved by another EPA authorized program.*


Authorized APCD Representative

SEAL



1775 West 55th Avenue
Denver, CO 80221
303.410.4941
trainingchc.com



Certifies that

Richard Ralston

Has successfully completed the required training hours and passed the examination required by the Colorado Department of Public Health and Environment for:

Lead-Based Paint Risk Assessor Refresher

For the purposes of accreditation under the Colorado Department of Public Health and Environment Regulation No. 19 and other standard developed by EPA pursuant to Title IV of TSCA

Course Date: April 6, 2016
Certificate No.: R16-031-LRA-CO
No. of Hours: 8
Expiration Date: April 6, 2019

Certification not valid without watermark

Luis E. Peon

Luis Peon - Instructor

Danaya Benedetto

Danaya Benedetto - Training Program Manager

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200828-0

EMSL Analytical, Inc.
Denver, CO

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

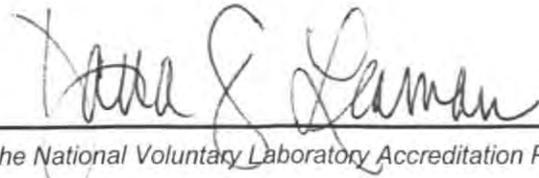
Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2018-04-01 through 2019-03-31

Effective Dates




For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.

1010 Yuma Street
Denver, CO 80204
Ms. Amanda Lang
Phone: 303-740-5700
Email: alang@emsl.com
<http://www.emsl.com>

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200828-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

A handwritten signature in black ink, appearing to read "Dana S. Laman".

For the National Voluntary Laboratory Accreditation Program



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: 100194

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | |
|---|---|
| <input checked="" type="checkbox"/> INDUSTRIAL HYGIENE | Accreditation Expires: September 01, 2018 |
| <input checked="" type="checkbox"/> ENVIRONMENTAL LEAD | Accreditation Expires: September 01, 2018 |
| <input checked="" type="checkbox"/> ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: September 01, 2018 |
| <input type="checkbox"/> FOOD | Accreditation Expires: |
| <input type="checkbox"/> UNIQUE SCOPES | Accreditation Expires: |

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

William Walsh, CIH
Chairperson, Analytical Accreditation Board

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 15: 03/30/2016

Date Issued: 08/31/2016



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: **100194**

Issue Date: 08/31/2016

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air analysis is not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 01/18/1995

Field of Testing (FoT)	Technology sub-type/ Detector	Method	Method Description <i>(for internal methods only)</i>
Paint		EPA SW-846 3050B	
		EPA SW-846 7000B	
Soil		EPA SW-846 3050B	
		EPA SW-846 7000B	
Settled Dust by Wipe		EPA SW-846 3050B	
		EPA SW-846 7000B	
Airborne Dust		NIOSH 7082	
Composited Wipes		EPA SW-846 3050B	
		EPA SW-846 7000B	

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>

B

POSITIVE ASBESTOS & LEAD
SAMPLE MATERIAL
PHOTOGRAPHS





Vent Wrap

Samples Represented –
AP49A-R2-VW7A
AP49A-R2-VW7Q
AP49A-B-VW7B
AP49A-B-VW7C



Roofing Mastic

Samples Represented –
AP49A-EX-R14A
AP49A-EX-R14B
AP49A-EX-R14C



Multiple Colors-LCP

Sample Represented –
AP49A-EX-L-6

C

LABORATORY RESULTS &
CHAIN OF CUSTODY-
ASBESTOS





EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018
Project: 18-3066-016-A-AP49A

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-R1-PL1A-Texture 1 221803640-0001	Knockdown Textured Plaster	White Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R1-PL1A-Texture 2 221803640-0001A	Knockdown Textured Plaster	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R1-PL1A-Skim Coat 221803640-0001B	Knockdown Textured Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-R1-PL1A-Plaster 221803640-0001C	Knockdown Textured Plaster	Beige Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-R3-PL1B-Texture 1 221803640-0002	Knockdown Textured Plaster	White/Purple Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-PL1B-Texture 2 221803640-0002A	Knockdown Textured Plaster	White Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-PL1B-Skim Coat 221803640-0002B	Knockdown Textured Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-PL1B-Plaster 221803640-0002C	Knockdown Textured Plaster	Beige Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-R3-PL1B-Dr ywall 221803640-0002D	Knockdown Textured Plaster	Brown/White Fibrous Homogeneous	15% Cellulose	70% Gypsum 15% Non-fibrous (Other)	None Detected
AP49A-R3-PL1C-Te xture 1 221803640-0003	Knockdown Textured Plaster	Gray/White Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-PL1C-Te xture 2 221803640-0003A	Knockdown Textured Plaster	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-PL1C-Ski m Coat 221803640-0003B	Knockdown Textured Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-R3-PL1C-Pla ster 221803640-0003C	Knockdown Textured Plaster	Beige Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-R3-PL1D-Te xture 221803640-0004	Knockdown Textured Plaster	White Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-PL1D-Ski m Coat 221803640-0004A	Knockdown Textured Plaster	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-R3-PL1D-Pla ster 221803640-0004B	Knockdown Textured Plaster	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-R2-TD2A-Te xture 221803640-0005	Knockdown Textured Drywall	Gray/White Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-R2-TD2A-Dr ywall 221803640-0005A	Knockdown Textured Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	70% Gypsum 15% Non-fibrous (Other)	None Detected
AP49A-R3-TD2B-Te xture 221803640-0006	Knockdown Textured Drywall	Gray/White Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-TD2B-Dr ywall 221803640-0006A	Knockdown Textured Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	70% Gypsum 15% Non-fibrous (Other)	None Detected
AP49A-R3-TD2C-Te xture 221803640-0007	Knockdown Textured Drywall	White Non-Fibrous Heterogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-TD2C-M esh 221803640-0007A	Knockdown Textured Drywall	Yellow Fibrous Homogeneous	35% Synthetic 60% Glass	5% Non-fibrous (Other)	None Detected
AP49A-R3-TD2C-Dr ywall 221803640-0007B	Knockdown Textured Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
AP49A-R4-TL3A-Te xture 221803640-0008	Smooth Textured Plaster	Gray/White Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R4-TL3A-Sk im Coat 221803640-0008A	Smooth Textured Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-R4-TL3A-PI aster 221803640-0008B	Smooth Textured Plaster	Beige Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018
Project: 18-3066-016-A-AP49A

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-R4-PL3B-Ski m Coat 221803640-0009	Smooth Textured Plaster	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R4-PL3B-Pla ster 221803640-0009A	Smooth Textured Plaster	Beige Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-R4-PL3C-Ski m Coat 221803640-0010	Smooth Textured Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-R4-PL3C-Pla ster 221803640-0010A	Smooth Textured Plaster	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-R2-PL4A-Sk im Coat 221803640-0011	Rough Textured Plaster	Gray/White Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R2-PL4A-PI aster 221803640-0011A	Rough Textured Plaster	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-R3-PL4B-Te xture 221803640-0012	Rough Textured Plaster	White Non-Fibrous Heterogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-R3-PL4B-Ski m Coat 221803640-0012A	Rough Textured Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-R3-PL4B-Pla ster 221803640-0012B	Rough Textured Plaster	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-SW-PL4C-T exture 221803640-0013	Rough Textured Plaster	Tan/White Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
AP49A-SW-PL4C-S kim Coat 221803640-0013A	Rough Textured Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-SW-PL4C-PI aster 221803640-0013B	Rough Textured Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-R3-CC5A 221803640-0014	Green Concrete	Green Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-R3-CC5B 221803640-0015	Green Concrete	Green Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-R3-CC5C 221803640-0016	Green Concrete	Gray/Tan/Green Non-Fibrous Heterogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-B-VB6A 221803640-0017	Concrete Vapor Barrier	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
AP49A-B-VB6B 221803640-0018	Concrete Vapor Barrier	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
AP49A-B-VB6C 221803640-0019	Concrete Vapor Barrier	Brown/Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
AP49A-R2-VW7A 221803640-0020	Vent Wrap	Beige Fibrous Homogeneous	15% Cellulose	20% Non-fibrous (Other)	65% Chrysotile

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-R2-VW7Q 221803640-0021	Vent Wrap	Beige Fibrous Homogeneous	15% Cellulose	20% Non-fibrous (Other)	65% Chrysotile
AP49A-B-VW7B 221803640-0022	Vent Wrap	Brown/Beige Fibrous Homogeneous	15% Cellulose	20% Non-fibrous (Other)	65% Chrysotile
AP49A-B-VW7C 221803640-0023	Vent Wrap	Gray/White Fibrous Homogeneous	15% Cellulose	20% Non-fibrous (Other)	65% Chrysotile
AP49A-SW-CMU8A 221803640-0024	CMU/Mortar	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-R2-CMU8B 221803640-0025	CMU/Mortar	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-SW-CMU8C 221803640-0026	CMU/Mortar	Gray/White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-EX-BM9A-B rick 221803640-0027	Brick/Mortar	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-EX-BM9A-M ortar 221803640-0027A	Brick/Mortar	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-EX-BM9B-Br ick 221803640-0028	Brick/Mortar	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-EX-BM9B-M ortar 221803640-0028A	Brick/Mortar	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-EX-BM9C-Br ick 221803640-0029	Brick/Mortar	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-EX-BM9C-M ortar 221803640-0029A	Brick/Mortar	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
AP49A-R3-L10A 221803640-0030	Flooring - Multi	Brown/Black/Clear Non-Fibrous Homogeneous	2% Glass	98% Non-fibrous (Other)	None Detected
Result includes a small amount of inseparable attached clear adhesive					
AP49A-R3-L10B-Flo oring 1 221803640-0031	Flooring - Multi	Black/Clear Non-Fibrous Homogeneous	2% Glass	98% Non-fibrous (Other)	None Detected
Result includes a small amount of inseparable attached clear adhesive					
AP49A-R3-L10B-Flo oring 2 221803640-0031A	Flooring - Multi	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-R3-L10C-Flo oring 1 221803640-0032	Flooring - Multi	Tan/Black Non-Fibrous Homogeneous	<1% Glass	100% Non-fibrous (Other)	None Detected
AP49A-R3-L10C-Ad hesive 221803640-0032A	Flooring - Multi	Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-R3-L10C-Flo oring 2 221803640-0032B	Flooring - Multi	Black/Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-EX-WG11A 221803640-0033	Window Glazing	White Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-EX-WG11B 221803640-0034	Window Glazing	White Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-EX-WG11C 221803640-0035	Window Glazing	Gray/White Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-EX-ST12A- Stucco 221803640-0036	Stucco	White Non-Fibrous Heterogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-EX-ST12A- Concrete 221803640-0036A	Stucco	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-EX-ST12B-S tucco 221803640-0037	Stucco	White Non-Fibrous Heterogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-EX-ST12B-C oncrete 221803640-0037A	Stucco	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-EX-ST12C-S tucco 221803640-0038	Stucco	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
AP49A-EX-ST12C-C oncrete 221803640-0038A	Stucco	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-EX-RF13A-P aint 221803640-0039	Roof Flashing	White/Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-EX-RF13A-F lashing 221803640-0039A	Roof Flashing	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
AP49A-EX-RF13B-P aint 221803640-0040	Roof Flashing	White/Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-EX-RF13B-F lashing 221803640-0040A	Roof Flashing	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
AP49A-EX-RF13B-T ar 221803640-0040B	Roof Flashing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-EX-RF13Q-P aint 221803640-0041	Roof Flashing	White/Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-EX-RF13Q-F lashing 221803640-0041A	Roof Flashing	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
AP49A-EX-RF13C-P aint 221803640-0042	Roof Flashing	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-EX-RF13C-F lashing 221803640-0042A	Roof Flashing	Black/Silver Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018
Project: 18-3066-016-A-AP49A

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-EX-R14A-R Roofing 1 221803640-0043	Roofing	Black Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
AP49A-EX-R14A-R Roofing 2 221803640-0043A	Roofing	Black Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
AP49A-EX-R14A-M Roofing 221803640-0043B	Roofing	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
AP49A-EX-R14A-Pa Roofing 221803640-0043C	Roofing	White/Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-EX-R14A-R Roofing 3 221803640-0043D	Roofing	Black Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
AP49A-EX-R14B-Ro Roofing 1 221803640-0044	Roofing	Black Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
AP49A-EX-R14B-M Roofing 221803640-0044A	Roofing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
AP49A-EX-R14B-Ro Roofing 2 221803640-0044B	Roofing	White/Black Non-Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
Inseparable paint / coating layer included in analysis					
AP49A-EX-R14C-Ro Roofing 1 221803640-0045	Roofing	Black Fibrous Homogeneous	10% Synthetic	90% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
AP49A-EX-R14C-Roofing 2 221803640-0045A	Roofing	Black Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
AP49A-EX-R14C-Mastic 221803640-0045B	Roofing	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
AP49A-EX-R14C-Roofing 3 221803640-0045C	Roofing	Black Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204
Tel/Fax: (303) 740-5700 / (303) 741-1400
<http://www.EMSL.com> / denverlab@emsl.com

EMSL Order: 221803640
Customer ID: ALLP62
Customer PO:
Project ID:

Attention: Logan Greenfield
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO 81003
Project: 18-3066-016-A-AP49A

Phone: (719) 250-0036
Fax: (719) 542-2807
Received Date: 05/23/2018 10:20 AM
Analysis Date: 05/30/2018
Collected Date: 05/17/2018

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

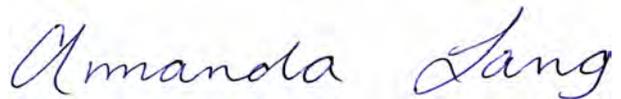
Sample Receipt Date: 05/23/2018 Sample Receipt Time: 10:20 AM
Analysis Completed Date: 05/30/2018 Analysis Completed Time: 6:09 PM

Analyst(s):


Amanda Lang PLM (29)


Gentry Catlett PLM (64)

Samples Reviewed and approved by:


Amanda Lang, Asbestos Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 05/30/2018 18:23:15



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

221803640

Denver, CO 80204
PHONE: (303) 740-5700
FAX (303) 741-1400

Company: All-Phase Environmental Consultants, Inc.		EMSL-Bill to: <input type="checkbox"/> Different <input checked="" type="checkbox"/> Same <small>If Bill to is Different note instructions in Comments**</small>	
Street: 721 W. 9th Street		<i>Third Party Billing requires written authorization from third party</i>	
City: Pueblo	State/Province: CO	Zip/Postal Code: 81003	Country: United States
Report To (Name): Logan Greenfield		Telephone #: 719-250-0036	
Email Address: logan@allphaseenvironmental.com		Fax #:	Purchase Order:
Project Name/Number: 18-3066-016-A-AP49A		Please Provide Results: <input type="checkbox"/> FAX <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> Mail	
U.S. State Samples Taken: CO		Connecticut Samples: <input type="checkbox"/> Commercial <input type="checkbox"/> Residential	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide

PCM - Air <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	TEM- Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)	TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	Soil/Rock/Vermiculite <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> TEM Qual. via Filtration Technique <input type="checkbox"/> TEM Qual. via Drop-Mount Technique Other: <input type="checkbox"/>

Check For Positive Stop - Clearly Identify Homogenous Group Filter Pore Size (Air Samples): 0.8µm 0.45µm

Samplers Name: Logan Greenfield Samplers Signature: [Signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
AP49A-R1-PL1A	KNOCKDOWN TEXTURED PLASTER	-	5-17-18
AP49A-R3-PL1B	↓	-	↓
AP49A-R3-PL1C	↓	-	↓
AP49A-R3-PL1D	↓	-	↓
AP49A-R2-TD 2A	KNOCKDOWN TEXTURED DRY WALL	-	↓
AP49A-R3-TD 2B	↓	-	↓
AP49A-R3-TD 2C	↓	-	↓
AP49A-R4-TL 3A	SMOOTH TEXTURED PLASTER	-	↓

Client Sample # (s):	Total # of Samples: 45
Relinquished (Client): <u>[Signature]</u> Date: 5-22-18	Time: 4:20
Received (Lab): <u>[Signature]</u> Date: 5/23/18	Time: 10:20 am
Comments/Special Instructions: EMFE-7951 7364 8095 3/A	



EMSL ANALYTICAL, INC
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only)

Denver, CO 80204
PHONE (303) 740-5700
FAX (303) 741-1400

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
AP49A-R4-PL3B	SMOOTH TEXTURED PLASTER	—	5/17/2018
AP49A-R4-PL3C	↓	—	
AP49A-R2-PL4A	ROUGH TEXTURED PLASTER	—	
AP49A-R3-PL4B	↓	—	
AP49A-SW-PL4C	↓	—	
AP49A-R3-CC5A	GREEN CONCRETE	—	
AP49A-R3-CC5B	↓	—	
AP49A-R3-CC5C	↓	—	
AP49A-B-VB6A	CONCRETE VAPOR BARRIER	—	
AP49A-B-VB6B	↓	—	
AP49A-B-VB6C	↓	—	
AP49A-R2-VW7A	VENT WRAP	—	
AP49A-R2-VW7B	↓	—	
AP49A-B-VW7C	↓	—	
AP49A-SW-CMU8A	CMU / MORTAR	—	
AP49A-R2-CMU8B	↓	—	
AP49A-SW-CMU8C	↓	—	
AP49A-EX-BM9A	BRICK / MORTAR	—	
AP49A-EX-BM9B	↓	—	
AP49A-EX-BM9C	↓	—	
AP49A-R3-L10A	FLOORING - MULTI	—	
AP49A-R3-L10B	↓	—	
AP49A-R3-L10C	↓	—	

*Comments/Special Instructions:



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody
EMSL Order Number *(Lab Use Only)*

Denver, CO 80204
Phone (303) 740-5700
Fax (303) 741-1400

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled	
AP49A-EX-WG11A	WINDOW GLAZING	—	5/17/2018	
AP49A-EX-WG11B	↓	—	↓	
AP49A-EX-WG11C	↓	—		
AP49A-EX-ST12A	STUCCO	—		
AP49A-EX-ST12B	↓	—		
AP49A-EX-ST12C	↓	—		
AP49A-EX-RF13A	ROOF FLASHING	—		
AP49A-EX-RF13B	↓	—		
AP49A-EX-RF13C	↓	—		
AP49A-EX-R14A	ROOFING	—		
AP49A-EX-R14B	↓	—		
AP49A-EX-R14C	↓	—		
*Comments/Special Instructions:				

D

LABORATORY RESULTS &
CHAIN OF CUSTODY -
LEAD & TCLP



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 786-5974

<http://www.EMSL.com>cinnaminsonleadlab@emsl.com

EMSL Order: 201805535

CustomerID: ALLP62

CustomerPO:

ProjectID:

Attn: **Richard Ralston**
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO

Phone: (719) 225-6953
 Fax: (719) 542-2807
 Received: 05/22/18 10:00 AM
 Collected: 5/17/2018

Project: 18-3066-016-L-49A

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>Lead Concentration</i>
AP49A-R3-L-1 Site: Room 3	201805535-0001	5/17/2018	5/24/2018	0.2613 g	<0.0080 % wt
AP49A-R3-L-2 Site: Room 3	201805535-0002	5/17/2018	5/24/2018	0.2676 g	<0.0080 % wt
AP49A-R3-L-3 Site: Room 3	201805535-0003	5/17/2018	5/24/2018	0.2594 g	<0.0080 % wt
AP49A-BASE-L-4 Site: Basement	201805535-0004	5/17/2018	5/24/2018	0.2882 g	<0.0080 % wt
AP49A-Ex-L-5 Site: Exterior	201805535-0005	5/17/2018	5/24/2018	0.2634 g	0.040 % wt
AP49A-Ex-L-6 Site: Exterior	201805535-0006	5/17/2018	5/24/2018	0.2654 g	0.091 % wt
AP49A-Ex-L-7 Site: Exterior	201805535-0007	5/17/2018	5/24/2018	0.2706 g	0.027 % wt

Phillip Worby, Lead Laboratory Manager
 or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 05/25/2018 09:16:25



Lead (Pb) Chain of Custody

EMSL Order ID (Lab Use Only):

201805535

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING
LABORATORY • PRODUCTS • TRAINING

Company: All-Phase Environmental Consultants, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 721 W. 9th Street		Third Party Billing requires written authorization from third party	
City: Pueblo	State/Province: CO	Zip/Postal Code: 81003	Country: US
Report To (Name): Richard Ralston		Telephone #: 719-545-0375	
Email Address: rick@allphaseenvironmental.com		Fax #:	Purchase Order:
Project Name/Number: 18-3066-016-L-49A		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: CO		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide

Matrix	Method	Instrument	Reporting Limit	Check
Chips <input checked="" type="checkbox"/> % by wt. <input type="checkbox"/> mg/cm ² <input type="checkbox"/> ppm (mg/kg)	SW846-7000B	Flame Atomic Absorption	0.01%	<input checked="" type="checkbox"/>
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	<input type="checkbox"/>
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	<input type="checkbox"/>
	NIOSH 7300M/NIOSH 7303	ICP-OES	0.5 µg/filter	<input type="checkbox"/>
Wipe* ASTM <input type="checkbox"/> non ASTM <input type="checkbox"/> *if no box checked, non-ASTM Wipe assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	<input type="checkbox"/>
	SW846-6010B or C	ICP-OES	1.0 µg/wipe	<input type="checkbox"/>
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW846-1311/SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
SPLP	SW846-1312/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW846-1312/SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
TTLC	22 CCR App. II, 7000B/7420	Flame Atomic Absorption	40 mg/kg (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW846-6010B or C	ICP-OES	2 mg/kg (ppm)	<input type="checkbox"/>
STLC	22 CCR App. II, 7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	<input type="checkbox"/>
	SW846-6010B or C	ICP-OES	2 mg/kg (ppm)	<input type="checkbox"/>
Wastewater Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.7	ICP-OES	0.020 mg/L (ppm)	<input type="checkbox"/>
Drinking Water Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	<input type="checkbox"/>
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter	<input type="checkbox"/>
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	<input type="checkbox"/>
Other:				<input type="checkbox"/>

Name of Sampler: Rick Ralston Signature of Sampler: RRalston

Sample #	Location	Volume/Area	Date/Time Sampled
AP49A-R3 L-1	Room 3	N/A	May 17-2018
AP49A-R3 L-2	Room 3	N/A	

Client Sample #s: - Total # of Samples: 7

Relinquished (Client): RRalston Date: May 17-2018 Time: 535

Received (Lab): OlesonMK Date: 5/22/18 Time: 1000 EMSL

Comments:

Bill To: All-Phase Environmental Consultants, Inc., 721 W. 9th Street, Pueblo, CO, 81003, US
Attention: Rick Ralston Phone: 719-641-6936 Email: rick@allphaseenvironmental.com Purchase Order:



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 786-5974

<http://www.EMSL.com>

cinnaminsonleadlab@emsl.com

EMSL Order:	201805521
CustomerID:	ALLP62
CustomerPO:	
ProjectID:	

Attn: **Richard Ralston**
All-Phase Environmental Consultants, Inc
721 West 9th Street
Pueblo, CO

Phone: (719) 225-6953
 Fax: (719) 542-2807
 Received: 05/22/18 10:00 AM
 Collected: 5/17/2018

Project: 18-3066- 016- TP- 49A

Test Report: Toxicity Characteristic Leachate Procedure (1311/7000B)

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
AP49-TCLP-1	201805521-0001	5/17/2018	5/24/2018	<0.40 mg/L
Site: Throughout 49A				

Phillip Worby, Lead Laboratory Manager
or other approved signatory

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367

Initial report from 05/25/2018 09:35:25



Lead (Pb) Chain of Custody

EMSL Order ID (Lab Use Only):

201805521

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Company : All-Phase Environmental Consultants, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 721 W. 9th Street		Third Party Billing requires written authorization from third party	
City: Pueblo	State/Province: CO	Zip/Postal Code: 81003	Country: US
Report To (Name): Richard Ralston		Telephone #: 719-545-0375	
Email Address: rick@allphaseenvironmental.com		Fax #:	Purchase Order:
Project Name/Number: 18-3066-016-TP-49A		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: CO		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide

Matrix	Method	Instrument	Reporting Limit	Check
Chips <input type="checkbox"/> % by wt. <input type="checkbox"/> mg/cm ² <input type="checkbox"/> ppm (mg/kg)	SW846-7000B	Flame Atomic Absorption	0.01%	<input type="checkbox"/>
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	<input type="checkbox"/>
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	<input type="checkbox"/>
	NIOSH 7300M/NIOSH 7303	ICP-OES	0.5 µg/filter	<input type="checkbox"/>
Wipe* ASTM <input type="checkbox"/> non ASTM <input type="checkbox"/> <small>*if no box checked, non-ASTM Wipe assumed</small>	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	<input type="checkbox"/>
	SW846-6010B or C	ICP-OES	1.0 µg/wipe	<input type="checkbox"/>
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input checked="" type="checkbox"/>
	SW846-1311/SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
SPLP	SW846-1312/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW846-1312/SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
TTLC	22 CCR App. II, 7000B/7420	Flame Atomic Absorption	40 mg/kg (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW846-6010B or C	ICP-OES	2 mg/kg (ppm)	<input type="checkbox"/>
STLC	22 CCR App. II, 7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	<input type="checkbox"/>
	SW846-6010B or C	ICP-OES	2 mg/kg (ppm)	<input type="checkbox"/>
Wastewater Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.7	ICP-OES	0.020 mg/L (ppm)	<input type="checkbox"/>
Drinking Water Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	<input type="checkbox"/>
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter	<input type="checkbox"/>
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	<input type="checkbox"/>
Other:				<input type="checkbox"/>

Name of Sampler: Rick Ralston Signature of Sampler: R. Ralston

Sample #	Location	Volume/Area	Date/Time Sampled
AP49-TCLP-1	thru out 49A	APPROX 1/2 LB	MAY 17 - 2018

Client Sample #s: _____ Total # of Samples: 1

Relinquished (Client): R. Ralston Date: MAY 17 - 2018 Time: 5:30

Received (Lab): CLUD Date: 5/22/18 Time: 10am EMSL

Comments:
Bill To: All-Phase Environmental Consultants, Inc., 721 W. 9th Street, Pueblo, CO, 81003, US
Attention: Rick Ralston Phone: 719-641-6936 Email: rick@allphaseenvironmental.com Purchase Order

6b. Asbestos Abatement Project Design



**Foothills
Environmental, Inc.**

Industrial Hygiene, Safety & Environmental Services

(Version 1, 10/22/18)

**ASBESTOS ABATEMENT
PROJECT DESIGN**

COMMERCIAL BUILDING ABATEMENT PROJECT

**2381 E. 46TH AVENUE
DENVER, COLORADO 80216**

PREPARED FOR:

**JKS Industries, LLC
747 Sheridan Blvd., #9A
Lakewood, Colorado 80214**

October 22, 2018

FEI Project Number: AS18207-4

Prepared By:

Nicolas D. Vasquez, CDPHE Cert #22566
Foothills Environmental

Foothills Environmental, Inc.
11099 W. 8th Ave.
Lakewood, Colorado 80215
Phone: 303-232-2660

Table of Contents

1.0	Scope of Work.....	4
1.1	Materials Identified for Removal.....	4
1.2	Schedule.....	4
1.3	Sequence of Work.....	4
1.4	Discussion of Removal Methods	5
2.0	Special Conditions	6
2.1	Regulatory Notification and Variances.....	6
2.2	Project Manager Requirement	6
2.3	Facility Occupancy Status.....	6
2.4	Site Security.....	6
2.5	Field Changes	6
3.0	Project Design	6
3.1	Standards and Primacy of Rules	6
3.2	Site Access.....	7
3.3	Utilities Service.....	7
3.4	Decontamination Facilities & Load-Out Facilities	7
3.5	Critical Barriers.....	7
3.6	Negative Pressure Ventilation.....	7
3.7	Air Exchange Calculations	7
3.8	Containment Construction	8
3.9	Set up of work areas.....	8
	Pre-Cleaning Activities	9
3.10	Asbestos Removal.....	9
3.11	Asbestos Spill Response	9
3.12	Asbestos Waste Transportation, Storage, and Disposal.....	9
	Waste Disposal:.....	10
	Waste Transporter:	10
3.13	Final Clean/ Final Visual Inspection Criteria.....	10
3.14	Final Air Clearance Monitoring.....	10
3.15	Personal Exposure Air Monitoring	11
3.16	Electrical Hazards Control.....	11
3.17	Emergency Egress and Fire Protection	11
3.18	Fire Protection Plan	11
3.19	Fall Protection.....	11
3.20	Respiratory Protection / PPE	11
3.21	Work Area Protection	11
3.22	Additional PPE	12
3.23	Pre-Abatement Document Submittal	12

APPENDIX A – Drawings

APPENDIX B – Certificates

1.0 Scope of Work

1.1 Materials Identified for Removal

The General Abatement Contractor (GAC) will be performing the removal of asbestos containing material(s) as indicated in the table below. This information was gathered from the inspection report prepared by All-Phase Environmental Consultants (APEC) dated June 25, 2018. A copy of the Inspection and this Project Design will be available onsite during the course of the project. The total amount of actual asbestos containing material to be removed on this project is estimated to be greater than 160 sf/260 lf or the equivalent of a 55 gallon drum.

The following ACM was identified for removal prior to demolition:

Table 3-1A Positive Asbestos Containing Samples

Sample Name	Sample Location	Lab Results/ Asbestos Type	Detection Method(s)	Condition	Material Description	Material Location	NESHAP Classification	Estimated Quantity (Sq. ft.)
AP49A-R2-VW7A	ROOM 2	VENT WRAP 65% CHRYSOTILE	PLM	Good	VENT WRAP	VENTS IN ROOM 2 AND CAN BE VIEWED IN THE BASEMENT	RACM	5
AP49A-R2-VW7Q		VENT WRAP 65% CHRYSOTILE	PLM	Good			RACM	
AP49A-B-VW7B	BASEMENT	VENT WRAP 65% CHRYSOTILE	PLM	Good			RACM	
AP49A-B-VW7C		VENT WRAP 65% CHRYSOTILE	PLM	Good			RACM	

Regulatory asbestos abatement notification and permit from the Colorado Department of Public Health and Environment (CDPHE) will be required for this project.

1.2 Schedule

The following schedule has been proposed for the project. Phasing and dates are included in Section 1.3, Sequence of Work.

Project Start Date: October 30, 2018

Project Completion Date: November 1, 2018

1.3 Sequence of Work

The following phasing plan has been developed for the abatement. This plan was submitted with the permit application which corresponds to the drawing attached in Appendix A.

- **Phase 1** Start: October 30, 2018
Finish: November 1, 2018

Abatement of vent wrap in all designated areas will be completed in one secondary containment.

1.4 Discussion of Removal Methods

All friable asbestos-containing vent wrap, as well as asbestos contaminated materials that are located in the work area shall be removed from their installed locations via facility component removal inside a secondary containment and by utilizing wet removal methods and a combination of handheld tools.

Waste generated during removal will be gathered wrapped with 6ml thick polyethylene sheeting while wet. Work will be accomplished using CDPHE certified supervisors and workers.

Work completion includes preparation of the work area, pre-clean activities, removal and disposal of all specified ACM from the premises, final cleaning of the work area, final visual inspection, lockdown, and final clearance monitoring. The project will be considered complete when all containments and work areas have passed clearance criteria.

The following types of containments will be used during the project followed by procedures for setup and dismantling:

Secondary Containments

The GAC shall conduct abatement activities in accordance with CDPHE Regulation No. 8 in the following mandatory sequence for secondary containment:

- 1) Install critical barriers (pursuant to subsection III.I, Critical Barrier Installation)
- 2) Establish negative pressure (pursuant to Regulation No. 8 subsection III.J, Air Cleaning and Negative Pressure Requirements)

Note: The removal of non-ACM building materials and components may only take place after negative air pressure is established in the containment work area(s).

- 3) Construct the decontamination area (pursuant to subsection III.K, Decontamination Area)
- 4) Pre-clean surfaces (pursuant to subsection III.L, Pre-cleaning of Surfaces)
- 5) Cover fixed objects (pursuant to subsection III.M, Covering Fixed Objects)
- 6) Construct the containment (pursuant to subsection III.N.4, Secondary Containment)
- 7) Conduct abatement (pursuant to subsection III.V.2, Facility Component Removal)
- 8) Conduct final visual inspection (pursuant to paragraph III.P.1., Final Visual Inspection)
- 9) Conduct final clearance air monitoring (pursuant to paragraph III.P.3., Final Clearance Air Monitoring)
- 10) Conduct the tear-down (pursuant to subsection III.Q., Tear-down)

All waste from the project will be packaged in approved containers and transferred to an approved landfill for disposal. After successful air clearance of each containment the containment can be removed and all non-reusable containment materials will be packaged for disposal.

2.0 Special Conditions

2.1 Regulatory Notification and Variances

The General Abatement Contractor, (GAC) will make any required notifications to Federal and State entities regulating their work as required by applicable rules, regulations, and standards. This includes, but is not limited, to the National Emission Standards for Hazardous Air Pollutants (NESHAP) notification [notice provided to the Colorado Department of Public Health and Environment (CDPHE) with permit application]. *The abatement contractor is responsible for quantifying amounts of ACM necessary to properly complete the project.*

2.2 Project Manager Requirement

Colorado Regulation No. 8 requires a Project Manager on all asbestos abatement projects in which the amount of friable ACM to be abated exceeds 1,000 linear feet on pipes, or 3,000 square feet on other surfaces. A Project Manager may be required for this project, unless a waiver is requested and granted by CDPHE.

2.3 Facility Occupancy Status

During abatement activities the building will not be occupied by the former tenants but may be visited by owner personnel as well as other tradesmen.

2.4 Site Security

Entry to the regulated asbestos work area is by permission only to authorized personnel. The perimeter of the work area may be monitored during abatement by a certified Air Monitoring Specialist (AMS). Only asbestos certified/licensed personnel employed by the GAC or federal or state regulatory agency personnel and the AMS will be allowed access to the work area. A logbook will be maintained at the entrance to the work area. Everyone who enters the work area must record name, affiliation, time in and time out for each entry.

2.5 Field Changes

Minor modifications to the project design are allowed. Minor changes include but are not limited to, relocation of negative air machines, decontamination facility and waste load-out. Any modifications to the project design must be approved by the Project Designer before the changes are made.

3.0 Project Design

3.1 Standards and Primacy of Rules

The following standards will be adopted as they pertain to asbestos abatement. In any instance where adopted standards are in conflict with each other, the most stringent shall apply.

- 1) Colorado Department of Public Health and Environment Regulation #8
- 2) 5CCR 1000-10 Part B asbestos handling, transportation, and storage
- 3) 29 CFR 1926.1101, the OSHA Construction Industry Asbestos Standard
- 4) 40 CFR 61 Subpart M, EPA's NESHAP Asbestos Standard
- 5) NIOSH/OSHA/EPA –“Occupational; Safety & Health Guidance Manual for Hazardous Waste Site Activities”, Section 8-20; Heat Stress and Other Physiological Factors.

- 6) All other applicable laws, rules, and regulations, including but not limited to those relating to:
- 7 Workers' Compensation Insurance;
- 8 Liability Insurance
- 9 All contract specifications and documentation

3.2 Site Access

The GAC has access to the facility for the purpose of abatement from 6:30 AM to 5:00 PM until project completion which is projected to be 11/1/18.

3.3 Utilities Service

Access to electrical power, water and sanitary sewer is not available inside the facility. The contractor will provide utility services during the duration of the project. Any temporary utility lines running to the regulated asbestos work area shall be adequately protected from damage and abrasion from vehicle and foot traffic. All waste water shall be filtered to five (5) microns prior to discharge into a sanitary sewer.

GAC will have to provide temporary restrooms located close to the project site at approved locations for the duration of the project (to be placed in a protected area if possible).

3.4 Decontamination Facilities & Load-Out Facilities

Personnel decontamination facilities shall consist of an Equipment (Dirty) Room, Shower, and a clean room constructed in accordance with Regulation #8 III.K Decontamination Unit. If waste load out is by direct load out, it shall consist of a direct waste loadout configuration that is currently approved by CDPHE (Configuration diagram approved by CDPHE shall be attached to this Project Design if used).

All load-out and disposal procedures shall be in accordance with applicable federal, state, and local regulations and project specifications.

3.5 Critical Barriers

All critical barriers will consist of a minimum 1 layer of 6mil poly critical barrier on all, openings, and vents.

3.6 Negative Pressure Ventilation

The GAC shall maintain a negative pressure differential of -0.02 inches of water in the work areas in accordance with Regulation #8 III.J Air cleaning and Negative Pressure Requirements, until final visual and clearance air monitoring complete. The calculations in the next section take into account at least 1 backup Negative Air Machine (NAM) with HEPA filtration. The contractor will also be using generators for maintaining electrical supply. In the case of generator failure, all workers will leave the work area and seal the containment. A replacement generator will be available onsite or within an hour's time of the project for use in case of failure. Work will resume when negative pressure is restored. If negative pressure is not restored within an hour's time alternate means of electrical supply will be sought. If no supply is available, contractor will contact CDPHE and follow directions for spill response.

3.7 Air Exchange Calculations

AIR CHANGE CALCULATIONS *for a 2000 cfm negative air machine (NAM)*

$$\text{AIR CHANGES} = \frac{A}{B \times C}$$

Where: A = Work area volume in cubic feet (l x w x h)
 B = 15 minutes
 C = Estimated rated capacity of NAM (1,500 cfm)

Phase 1 – Textured Drywall and Floor Tiles (Full Containment 1)

$$A = 10 \times 10 \times 10 = 1000 \text{ cubic feet}$$

$$B \times C = 22,500$$

$$\frac{1000}{22,500} = 0.04$$

1 NAM required
 2 NAM's recommended

3.8 Containment Construction

Containments for the asbestos removal shall be constructed in accordance with CDPHE Regulation 8 and this project design. Danger signs will be posted at ingress locations, and approaches to locations, where airborne concentrations of asbestos exceed or can reasonably be expected to exceed the PEL. Signs will be posted at a distance sufficiently far from the work area to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of workplace containment barriers.

Danger signs will include the following wording:

**DANGER
 ASBESTOS
 CANCER AND LUNG DISEASE HAZARD
 AUTHORIZED PERSONNEL ONLY
 RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA**

3.9 Set up of work areas

Containment Components

2"x 4"s wood studding can be used as temporary framing to support any containment systems; this may include tie wires also where needed. 1 layer of 10 mil re-enforced poly sheeting will be utilized for any exterior critical barriers, negative air machines will be installed once the poly sheeting is installed. A full 3 stage decontamination unit equipped with hot and cold water, shampoo, disposable towels, and a 2 stage water filtration unit filter all water to 5 micron, prior to being discharged into the sanitary sewer system shall be used. View ports will be installed where appropriate with a minimum of 12" x 12" Plexi™ glass and or exterior windows.

Air flow testing utilizing smoke tubes will be performed to validate air flow direction and air exchanges.

Pre-Cleaning Activities

Pre-cleaning activities will be performed in accordance with CDPHE Regulation 8. All workers performing pre-cleaning must utilize HEPA equipped vacuums and wet methods. Any prepping activities that will contact non-friable ACM, or be within arms' reach of friable ACM must be accomplished by workers utilizing PPE.

3.10 Asbestos Removal

Removal of materials containing asbestos and contaminated with asbestos shall be performed in accordance with the Colorado Department of Public Health and Environment Regulation 8 III, Abatement, Renovation and Demolition Projects and this project design.

3.11 Asbestos Spill Response

In the event of a spill or a breach of the regulated work area containment, follow procedures in Section III.T. of Regulation No. 8, which includes cleaning the area outside the regulated work area. Visible debris shall be cleaned utilizing HEPA vacuuming and wet wiping plus an additional 10 horizontal feet beyond the visible debris. All filters, mop heads, and cloths utilized during clean-up activities shall be disposed of as asbestos contaminated waste in leak tight containers.

The GAC shall have available, equipment and supplies (HEPA filtered vacuum, airless sprayer with amended water, mops, rags, polyethylene sheeting, duct tape, caution tape...) for spill response in the event of accidental spill of materials containing asbestos.

In the event of an asbestos spill outside the work area containment the GAC shall:

- Make appropriate notices based on size of spill.
- Immediately wet the spilled material and surrounding area with the airless sprayer.
- Restrict access to the spill area and post warning signs to prevent entry to the area by persons other than those necessary to respond to the incident.
- Seal all openings between the contaminated and uncontaminated areas as directed by the asbestos consultant. This is to be accomplished by using polyethylene sheeting and tape.
- HEPA vacuum and wet clean all surfaces in the contaminated area.

Following completion of the above, the on sight Air Monitoring Specialist shall conduct a visual assessment of the spill area to confirm adequate cleaning has been accomplished by the GAC.

3.12 Asbestos Waste Transportation, Storage, and Disposal

All ACM waste must be wrapped in two layers of 6 mil polyethylene sheeting or double-bagged in 6 mil polyethylene bags labeled with the appropriate OSHA label for asbestos and must also bear the generator label as required by EPA's 40 CFR 61 Subpart M NESHAP Standard. Containerizing and transport of asbestos wastes shall be in accordance with applicable federal and state regulations.

The existing installed building finishes, hardscaping and landscaping shall be protected from damage by the GAC, until completion of all works.

Safety scaffolding, rubbish skips, access ladders etc. shall be approved by the client and in accordance with the current Health and Safety regulations.

GAC workers will not drag or drop packaged waste. All waste equipment and materials will be hand carried, or transported in wheeled carts to waste transport vehicles.

All packaged asbestos waste shall be directly loaded from the work area onto a 6mil polyethylene lined enclosed truck or dumpster container for disposal. No waste material may be temporarily stored in the building or the work area containment.

Waste Disposal:

All waste containers shall be transported from the permitted work areas to an approved disposal land fill by the GAC (Denver Aurora Disposal Site).

Waste Transporter:

By 5280 Waste Solutions.

3.13 Final Clean/ Final Visual Inspection Criteria

All interior surfaces of the work area will be free of visible dust and debris. The work area must pass a final visual inspection by a CDPHE Certified Air Monitoring Specialist (AMS) leaving only critical barriers in place.

3.14 Final Air Clearance Monitoring

Clearance criteria for this containment shall be in accordance with CDPHE Regulation #8, Section III.P

For each work area within the project where the amount of ACM is:	State-Permitted Project in Non-School Building	
	Minimum # of samples to clear each of the following:	
	Work Area	Project
Less than 3 square feet/3 linear feet	1	5
From 3 square feet/3 linear feet up to 32 square feet/50 linear feet/volume equivalent of a 55-gallon drum	2	5
Greater than 32 square feet/50 linear feet/volume equivalent of a 55-gallon drum up to 160 square feet/260 linear feet/volume equivalent of a 55-gallon drum	5	5
Greater than 160 square feet/260 linear feet/volume equivalent of a 55- gallon drum	5	5

Upon notification that clearance monitoring levels are acceptable, the GAC may remove critical barriers and demobilize from the work area. If any samples collected for the final air test exceeds (0.01 fibers per cubic centimeter, 0.01 f/cm³ for PCM using the NIOSH Method 7400 or 70 structures per square millimeter (70 s/mm²) as analyzed by the TEM method in 40 C.F.R. Part 763 Appendix A to Subpart E (EPA 1995) the entire work area shall be re-cleaned immediately upon receipt of air test results.

Any failed abatement work area shall be re-tested and the costs associated for additional Final Clearance Air Monitoring shall be borne by the GAC at no additional cost to the Owner.

3.15 Personal Exposure Air Monitoring

The GAC shall be responsible for conducting personal exposure air-monitoring as applicable in accordance with OSHA 29 CFR 1926.1101 Asbestos Construction Standard. Contractor to supply results to personnel and will post results onsite.

3.16 Electrical Hazards Control

All electrical power utilized during the project will be on ground fault circuit interrupters (GFCI) whose power source is located outside the work area.

3.17 Emergency Egress and Fire Protection

The abatement contractor shall abide by the emergency egress rules for the facility. All contractor personnel shall receive emergency procedure orientation specific to the facility prior to initiation of abatement activities.

3.18 Fire Protection Plan

1. No items capable of initiating or sustaining combustion (lighters, matches, torches, etc.) will be allowed in containment.
2. The use of flammable liquids is not permitted.
3. Any electricity utilized must be on Ground Fault Circuit Interrupters (GFCI).
4. A minimum of one, 2A: 20B: C rated fire extinguishers will be maintained on-site. There must be available at least one 2A: 20B: C rated fire extinguisher within a maximum travel distance of 10 feet from any point in the work area.
5. Workers will be trained in the use of fire extinguishers, emergency egress plans, basic fire safety, and emergency reporting procedures prior to work beginning.
6. All emergency exits will be labeled as such with tools available for breaching poly and keys in door locks where necessary.
7. The Contractor must implement an emergency action and fire prevention plan in accordance with 29 CFR 1910.38 Employee emergency plans and fire prevention plans.

3.19 Fall Protection

The GAC shall provide proper fall protection and training for their employees when working above 6 feet of height in accordance with Occupational Safety and Health Administration 29 CFR Part 1926 Subpart M Fall Protection.

3.20 Respiratory Protection / PPE

The GAC shall provide proper respiratory protection for their employees with NIOSH approved HEPA filters during all pre-clean, abatement removal, waste load out procedures and during waste lift operations for effected employees. The GAC shall provide proof of medical fitness to wear respiratory protection and current fit testing documentation for all employees.

3.21 Work Area Protection

The GAC shall repair or replace, to the Owner's satisfaction, any damage caused by the GAC or GAC subcontractors, to existing finishes, landscaping, or other building components.

3.22 Additional PPE

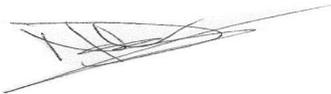
- Hooded Tyvek suits
- Safety Glasses with side shields (exception – not required when wearing a full face respirator).
- Leather Gloves
- Safety toe boots
- Fall Protection as required.
- PPE per MSDS / SDS requirements.

3.23 Pre-Abatement Document Submittal

The GAC shall provide the following submittals to the Owner's Asbestos Competent Person / Safety Department for approval prior to site mobilization.

- ✓ Copies of all worker AHERA / STATE certifications.
- ✓ Copies of all worker asbestos medical evaluations.
- ✓ Copies of all worker respirator fit tests.
- ✓ Copies of MSDS for all chemicals (spray-glue, encapsulant, surfactant etc.) that will be used
- ✓ Asbestos waste receipt / total.

Completed by:



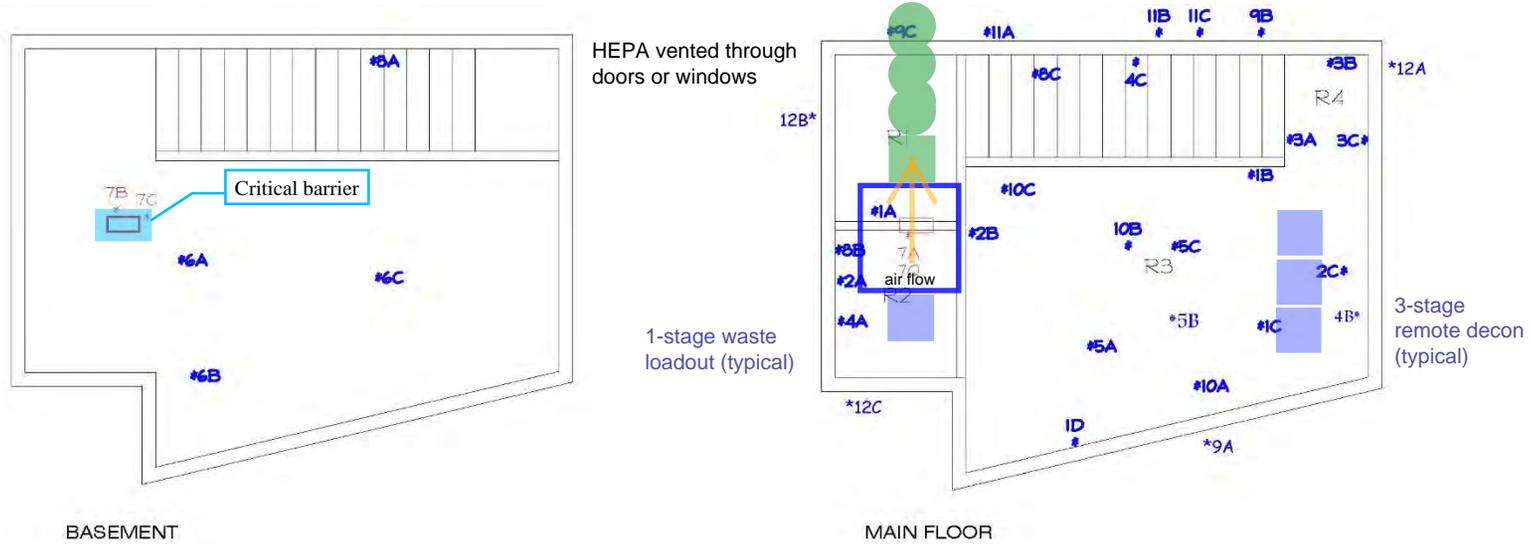
Nicolas D. Vasquez CDPHE Asbestos Project Designer Certificate # 22566

Foothills Environmental Asbestos Consulting Firm CDPHE Registration # 14925

Appendix A

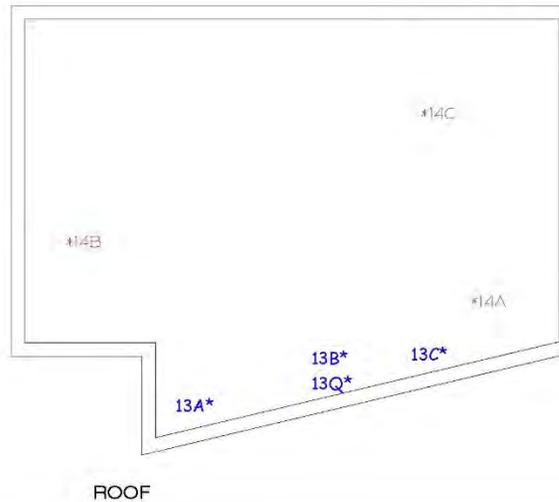
Drawings

October 30, 2018 - November 1, 2018
ABATEMENT IN SECONDARY CONTAINMENT



BASEMENT

MAIN FLOOR



ROOF

- R1 = Room Numbers
- 4B = Asbestos Samples (Detect)
- 4B = Asbestos Samples (Non-Detect)
- = Vent Boot Wrap Positive for Asbestos



DR BY: R.A.
 APPROVED: B.N.E.
 SCALE: 1/4" = 1'-0"

FIGURE 2 - Asbestos Bulk Sample Locations
 CENTRAL 70 - Structure Survey Assessment Map
 AP-49A
 2381 E. 46th Ave., Denver, CO
 May 17, 2018
 APEC #: 18-3066

ALL-PHASE
 ENVIRONMENTAL CONSULTANTS, INC.
 721 W 9TH STREET
 Pueblo, CO 81003 Ph: (719) 545-0375

Drawing excerpted from All-Phase Inspection

2381 E. 46 th AVENUE DENVER, CO (Not to Scale)	FEI Project #AS18207-4	Date: 10/12/18	Figure 1
	Approved by: DMB	Drawn By: NDV	
Foothills Environmental, Inc. 11099 W 8 th Avenue Lakewood, CO 80215		Signature:	CDPHE CERT #22566

Appendix B

Certificates



Colorado Department
of Public Health
and Environment

ASBESTOS CONSULTING FIRM

This certifies that

Foothills Environmental, Inc.

Registration No.: ACF - 14925

has met the registration requirements of 25-7-507, C.R.S. and the Air Quality Control Commission Regulation No. 8, Part B, and is hereby authorized to perform asbestos consulting activities as required under Regulation No 8, Part B, in the state of Colorado.

Issued: January 30, 2018

Expires: January 30, 2019

Authorized APCD Representative

SEAL



Colorado Department
of Public Health
and Environment

ASBESTOS CERTIFICATION*

This certifies that

Nicolas Vasquez

Certification No.: 22566

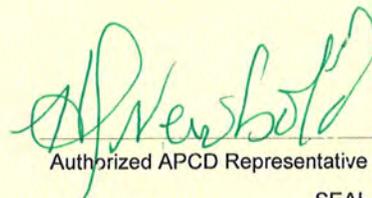
has met the requirements of 25-7-507, C.R.S. and Air Quality Control
Commission Regulation No. 8, Part B, and is hereby certified by the
state of Colorado in the following discipline:

Project Designer*

Issued: February 08, 2018

Expires: February 08, 2019

** This certificate is valid only with the possession of a
current Division-approved training course certification
in the discipline specified above.*


Authorized APCD Representative

SEAL



CHC Training
Nationwide Training & Certification Experts
www.trainingchc.com
303.412.6360
(855) 60.CERTIFY

1775 West 55th Avenue
Denver, CO 80221,
United States of America

CERTIFICATE OF ACHIEVEMENT

This certificate is awarded to:

NICOLAS VASQUEZ

In recognition of satisfactory completion of the EPA-approved annual asbestos refresher training course under section 206 of the Toxic Substance Control Act (TSCA) and Colorado Regulation No. 8 entitled

PROJECT DESIGNER

COURSE DATE:	DECEMBER 21, 2017
EXPIRATION DATE:	DECEMBER 21, 2018
COURSE HOURS:	8.0

Verify Credential



Danaya N. Benedetto
Co-Founder & CEO
Training Program Manager

Credential License ID: 11084750



Frank Hulce
Instructor

CHC Training Certificate No.
R17-2200-APD-CO

Visit our Website



6c. Pre-Demolition Engineering Survey



Pre-Demolition Survey
And General Demolition Plan
For
2331 & 2381 East 46th Avenue
Denver, CO 80216
(AP-49, AP-49A)



Engineers: David A. Poe, P.E., S.E.
Glen L. Wilson, E.I.

July 13, 2018
Project No: 180113

July 13, 2018

Stephen P. Di Nardo
JKS Industries, LLC
747 Sheridan Blvd #9A
Lakewood, CO 80214

Re: 2331 & 2381 East 46th Ave. Denver, CO 80216
Pre-Demolition Engineering Survey per OSHA 1926.850(a)
And General Demolition Plan

Date of Observation: 06/20/18

Dear Mr. Di Nardo:

At the request of JKS Industries (JKS), a representative from Anchor Engineering, Inc. (AEI) performed a site observation at the above-referenced structure on Wednesday, June 20, 2018.

For the purpose of this report, there are two buildings on the property. Some discrepancies exist in the addresses for the buildings. In this report the addresses will be the addresses that were on the building entrances at the time of our observation. The front elevation of the west building (2331) faces south and is parallel to 46th Avenue. The front elevation of the east building (2381) faces south and is parallel to 46th Avenue. Both properties are bordered on the north by Steavenson Place. At the time of our observation the buildings were vacant.

Additional considerations for this site include underground storage tanks (UST) for fuel and waste storage. Refer to the Integrated Work Plan provided by Region 8 Enviro, LLC and the Geophysical Report provided by JR Geophysics dated June 11, 2018 for tank locations and removal procedures.

The purpose of our site visit was twofold:

1. To give an assessment of the current condition of the structures as it relates to structurally related hazards before the proposed demolition activities. OSHA 1926.850 is stated below, along with project specific applicability to the subject building.
 - a. ***OSHA 1926.850(a):*** *Prior to permitting employees to start demolition operations, an engineering survey shall be made, by a competent person, of the structure to determine the condition of the framing, floors, and walls, and possibility of unplanned collapse of any portion of the structure. Any adjacent structure where employees may be exposed shall also be similarly checked. The employer shall have in writing evidence that such a survey has been performed.*

Project Specific Applicability: The information contained in this report satisfies the requirement of this guideline. The subcontractor shall review this report and make a copy available to all employees on the project at the pre-project meeting, and it shall also be included in the job site books.

- b. ***OSHA 1926.85(b):*** *When employees are required to work within a structure to be demolished which has been damaged by fire, flood, explosion, or other cause, the walls or floor shall be shored or braced.*

Project Specific Applicability: 2331 & 2381 East 46th Ave. Denver, CO 80216 have not been damaged by any fire, flood, explosion, or any other event. Therefore, no shoring or bracing is required.

- c. **OSHA 1926.850(c):** *All electric, gas, water, steam, sewer, and other service lines shall be shut off, capped, or otherwise controlled, outside the building line before demolition work is started. In each case, any utility company which is involved shall be notified in advance.*

Project Specific Applicability: The contractor and subcontractor will ensure all electric, gas, water, steam, sewer, and other services are to be cut off prior to any work being performed. Contractor shall confirm with KMP through the pre-demolition check list and present the necessary information in the pre-demolition meetings.

- d. **OSHA 1926.850(d):** *If it is necessary to maintain any power, water or other utilities during demolition, such lines shall be temporarily relocated, as necessary, and protected.*

Project Specific Applicability: The demolition of 2331 & 2381 East 46th Ave. Denver, CO 80216 does not require any power, water or other utilities.

- e. **OSHA 1926.850(e):** *It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property. When the presence of any such substances is apparent or suspected, testing and purging shall be performed and the hazard eliminated before demolition is started.*

Project Specific Applicability: All types of hazardous chemicals, gases, explosives, flammable materials, or other dangerous substances shall be removed from the structures prior to demolition as part of the pre cleaning phase during the environmental remediation. All materials are to be documented, manifested, and included in the environmental close out documents.

- f. **OSHA 1926.850(f):** *Where a hazard exists from fragmentation of glass, such hazards shall be removed.*

Project Specific Applicability: All hazards from fragmentation of glass shall be removed in the normal course of demolition.

- g. **OSHA 1926.850(g):** *Where a hazard exists to employees falling through wall openings, the opening shall be protected to a height of approximately 42 inches.*

Project Specific Applicability: No employees are permitted to enter the structures once demolition begins. Rule applies to interior demolition.

- h. **OSHA 1926.850(h):** *When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Signs, warning of the hazard of falling materials, shall be posted at each level. Removal shall not be permitted in this lower area until debris handling ceases above.*

Project Specific Applicability: No employees are permitted to enter the structures once demolition begins. Rule applies to interior demolition.

- i. **OSHA 1926.850(i):** *All floor openings, not used as material drops, shall be covered over with material substantial enough to support the weight of any load which may be imposed. Such material shall be properly secured to prevent its accidental movement.*

Project Specific Applicability: The buildings are single story structures. Refer to the demolition sequencing section of this report for further information.

- j. **OSHA 1926.850(j)**: *Except for the cutting of holes in floors for chutes, holes through which to drop materials, preparation of storage space, and similar necessary preparatory work, the demolition of exterior walls and floor construction shall begin at the top of the structure and proceed downward. Each story of exterior wall and floor construction shall be removed and dropped into the storage space before commencing the removal of exterior walls and floors in the story next below.*

Project Specific Applicability: The buildings are single story structures. Refer to the demolition sequencing section of this report for further information.

- k. **1926.850(k)**: *Employee entrances to multistory structures being demolished shall be completely protected by sidewalk sheds or canopies, or both, providing protection from the face of the building for a minimum of 8 feet. All such canopies shall be at least 2 feet wider than the building entrances or openings (1 foot wider on each side thereof), and shall be capable of sustaining a load of 150 pounds per square foot.*

Project Specific Applicability: Not applicable. The buildings are single story structures. No employees are permitted to enter the structures once demolition begins.

2. Provide a general outline of the demolition procedures and sequence that is proposed to be used in the demolition of the subject structures. These outlined procedures/sequences are subject to change by AEI and/or the demolition contractor based on the observed response of the structure overall and components thereof during actual demolition operations.

No architectural or structural drawings were provided for our review.

The buildings are single-story structures. The west building (2331) has multi-wythe masonry exterior walls with wood-framed roof rafters. The roof rafters are assumed to span east to west in the west portion of the building and north to south in the east portion. The west portion of the building has a concrete floor above a partial basement floor approximately 7'-0" below grade and the east portion has a concrete slab on grade. The north wall of the building is located approximately 12'-0" from the back of the curb at Steavenson Place. It is assumed to be founded on spread footings with concrete foundation walls and a concrete slab on grade floor. The east building (2381) is assumed to have wood-framed exterior walls and roof rafters. The north wall of the building is located approximately 9'-0" from the back of the curb at Steavenson Place. The building has a concrete floor over a full basement with a floor elevation approximately 7'-0" below grade. The building is assumed to be founded on spread footings with concrete foundation walls and a concrete slab on grade floor.

Existing Condition Observation

During our site visit we made visual observations from the inside of the structures and around the building perimeters. The structures were partially exposed in all areas. All of the existing structural systems that were exposed to view appeared to be in good condition. We saw no evidence of noteworthy structural distress. It is our professional opinion that the possibility of un-planned collapse of any portion of the existing structures is very low. Workers may be allowed in the buildings to prepare them for demolition with such activities as removal of materials or other work that does not involve activities that affect existing structural systems.

Outline of Proposed Demolition Procedures, Equipment, and Sequence

Equipment

We anticipate demolition for this structure to be completed with heavy equipment including:

- “Track-hoe” excavators capable of reaching structural elements to be demolished. Excavators may be equipped at times with buckets/grapples, hydraulically actuated demolition hammers or shears, and other custom extensions for demolition and/or holding elements for temporary stability.
- Small skid steer loaders may also be utilized from time to time during demolition

Demolition Sequencing

General

After the commencement of demolition with heavy equipment, by necessity, structural systems from this point forth will be destroyed. Demolition should proceed as fast as practical until the structure is demolished in its entirety. The lateral stability of the west building is provided by the perimeter multi-wythe masonry walls. The lateral stability of the east building is provided by the perimeter wood-framed walls.

During demolition operations, care must be taken to protect and prevent damage to any active or live utilities both above and below ground.

During demolition, water will be used to wet down the area that is being demolished prior to starting the demolition. During the demolition process a water spray will be used to minimize the fugitive particulate matter emissions. The ground will be sprayed with water either by water truck or some type of water spray to minimize fugitive particulate emissions from haul trucks and demolition equipment.

Sequence

Due to the close proximity of the north walls of both buildings to Steavenson Place, it is recommended that Steavenson Place be temporarily closed during demolition operations.

The west building’s (2331 East 46th Ave.) superstructure may be collapsed starting at the east portion of the building on the east side and proceeding through the length of the east portion in the east/west direction. The superstructure of the west portion of the building may be collapsed into the basement starting at the northwest corner of the building and proceeding thru the length of the west portion of the building to the south. Do not drive equipment onto the footprint of the building until the structure has been collapsed entirely.

The east building’s (2381 East 46th Ave.) superstructure may be collapsed into the basement by starting at the north side and proceeding through the length of the building to the south. Do not drive equipment onto the footprint of the buildings until the structure has been collapsed entirely.

Once the roof, walls, and floor systems are demolished, the slab on grade and foundations can be removed in any sequence. After the north foundation walls have been demolished, a minimum of 1 ½ to 1 slope of the grade shall be established to prevent damage to the grade at Steavenson Place. Final Grade and compaction design by others.

Closing

This report constitutes an engineering review and summary of the pre-demolition condition of the structural systems of the subject building as well as a general outline of demolition procedures and sequencing. Note that the conclusions drawn are based on visual observations and our expertise and experience with structural engineering of building structures. Unless noted otherwise, no non-destructive or destructive testing of any kind was performed, nor was any formal engineering analysis completed. These procedures/sequences outlined herein are subject to change by AEI and/or the demolition contractor based on the observed response of the structure overall and components thereof during actual demolition operations. Anchor Engineering, Inc. shall be held harmless for damage of any kind to surrounding structures or property or for injury of any kind to any person or persons. The demolition contractor is responsible for jobsite safety. The conclusions presented in this report are based on conditions noted at the time of the observation. Commentary or recommendations regarding environmental issues are beyond the scope of this report. Should questions arise, or if further information is required regarding the content of this report, please contact our office.

Sincerely,
Anchor Engineering, Inc.



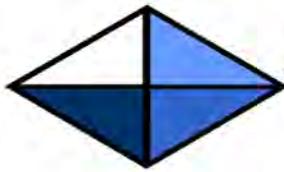
Glen L. Wilson, E.I.
Design Engineer

Reviewed By:



David A. Poe, P.E., S.E.
Principal

7. Asbestos Clearance Report



ALL-PHASE

ENVIRONMENTAL CONSULTANTS, INC.

October 30, 2018

Interior Air Monitoring Clearance (Duct Wrap)

Re: AP-49A – 2381 E. 46th Ave.
Denver, Colorado 80216

To Whom It May Concern:

On, October 29, 2018, Rick Ralston, Colorado Certified Asbestos Building Inspector and Colorado Air Monitoring Specialist with All-Phase Environmental Consultants, Inc. (APEC), conducted Air Monitoring clearances at the above referenced Subject Property. A visual inspection and air samples were collected inside the abatement containment to ensure that the asbestos fiber counts are below the regulated standard to guarantee this area is safe to re-occupy.

The Containment Air clearance consisted of five (5) 0.08um sampling cassettes, five (5) 1-16 liter per minute pumps, along with two (2) 20-inch box fans and a one-horse power leave blower used to perform an aggressive clearance of the containment. **All-Phase Environmental is an approved and certified Colorado Department of Public Health and Environment asbestos laboratory.**

Microscopic inspection of the above-mentioned samples were conducted in the All Phase Environmental PCM laboratory. This inspection verified that ALL the samples taken were at or below 0.01 fiber per cubic centimeter as required by the Colorado Department of Public Health and Environmental standard for a safe room or area. See Lab analytical results attached to this document.

Based on the visual inspection and the analytical results, this area is considered safe to re-occupy.

APEC will not be held responsible for the mishandling of the information contained herein, and/or any items found after October 29, 2018

Please feel free to call with any questions and or concerns.

Sincerely,

Richard L. Ralston
Colorado Certified Asbestos Inspector - 4261
Colorado Certified AMS - 4261



Colorado Department
of Public Health
and Environment

ASBESTOS LABORATORY

This certifies that

All Phase Environmental Consultants, Inc.

Registration No.: AL - 24462

has met the registration requirements of 25-7-507, C.R.S. and the Air Quality Control Commission Regulation No. 8, Part B, and is hereby authorized to perform asbestos laboratory testing activities, as required by Regulation No 8, Part B, in the state of Colorado.

Issued: April 20, 2018

Expires: April 20, 2019

Authorized APCD Representative

SEAL

8. Materials Summary

January 22, 2019

Megan Wood
 Kiewit Infrastructure Co.
 160 Inverness Drive West, Suite 110
 Englewood, CO 80112

RE: AP-49A 2381 E 46th Ave. – Summary of Removed Materials

Dear Megan,

Below is a summary of the materials removed from 2381 E 46th Ave. For more details regarding the location of the Asbestos Containing Materials (ACM) and the asbestos content please refer to the Table 3-1A of the All-Phase Environmental SSAR (Page 16).

Material Removed	Quantity
Asbestos Containing Paper Duct Wrap	5 SF
Regulated Building Materials	4 Lightbulbs, 6 Gallons Latex Paint, 1 Thermostat
Clean Demolition Debris	100,800 lbs

If you have any questions or require further information regarding these quantities, please contact me at 303-238-0207.

Sincerely,

JKS Industries, LLC



Jeffrey Knight
 President

9. Waste Manifests

9a. Asbestos Waste Manifests

CAN# 4062

WO# 141774 CWM!



ASBESTOS NESHAP WASTE SHIPMENT RECORD

1. Generator ID Number N / A		2. Page 1 of	3. Emergency Response Phone 800-424-9300	4. Waste Tracking Number 2234862	
5. Generator's Name and Mailing Address COLORADO DEPARTMENT OF TRANSPORTATION 747 SHERIDAN BLVD UNIT 9A LAKEWOOD CO 80214			Generator's Project Address (if different than mailing address) AP-49A 2381 E 46 th Ave Denver, CO 80216		
Generator's Phone: (303) 512-5000					
6. Transporter 1: Complete Company Name and Address 5280 Waste Solutions 605 W 62 Denver Co 80221				Transporter Phone 720 884-0700	
7. Transporter 2: Complete Company Name and Address				Transporter Phone	
8. Designated Disposal Facility Name and Site Address DENVER ARAPAHOE DISPOSAL 3500 S GUN CLUB RD AURORA CO 80018			Facility's Phone: (720) 876-2620		
9. Waste Shipping Name, Description, & Profile Number		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. RQ, NA 2212, Asbestos, 9, PG III 12677500				1 yd	NONE
2.					
13. Regulatory Agency: Colorado Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80222-1530			Emergency Notification: CHEMTREC (800) 424-9300 24-hour Toll Free Number		
14. Bill to & Account Number: Customer Acct #: D 14925 Customer Name: JKS INDUSTRIES					
15. Contractor/Generator Certification: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/ placarded, and are in all respects in proper condition for transportation and disposal according to applicable national and state governmental regulations. I hereby certify that the above described waste is not a hazardous waste as defined by federal, state or local regulations and does not contain regulated quantities of PCB's or radioactive materials.					
Generator's/Offeror's Printed/Typed Name MEGAN WOOD		Signature <i>Megan Wood</i>		Month	Day Year
				11	05 18
16. Transporter Acknowledgement of Receipt of Materials					
Transporter 1 Printed/Typed Name Tommy Alencio		Signature <i>Tommy Alencio</i>		Month	Day Year
Transporter 2 Printed/Typed Name		Signature		11	16 18
17. Special Handling Instructions Soil originating from the above site shall not be used as daily cover or sold as clean fill.					
18. Discrepancy Indication Space:				19. Ticket # 3261156	
Initials of Person noting discrepancy		Signature		Date	
20. Management Method/Location Landfill _____ Monofill G Location:					
21. Designated Disposal Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18					
Printed/Typed Name Anthony		Signature <i>Anthony</i>		Month	Day Year
				11	16 18

GENERATOR

TRANSPORTER

DESIGNATED FACILITY

9b. Regulated Building Materials (RBMs) Waste Manifests

February 14, 2018

CDOT

RE: Regulated Building Materials Manifests in SSCRs

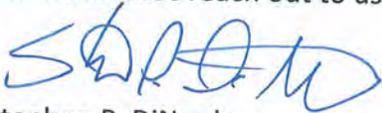
To whom it may concern;

This letter is to explain the "SSCR Tracking Sheet" JKS Industries prepared for the purpose of documenting the manifests for the Regulated Building Materials (RMBs) included in the SSCR's.

The attached table describes how we have batched the RBM manifests per property. Here is a brief description of each grouping:

- Group 1 Independent: Each of the properties in this group has/will have its own RBM manifest. These manifests will be included in the SSCR for each property.
- Group 2 Pilot: The RBMs were removed from these properties and taken to the Pilot Truck Stop (AP-86). The reason for this, is that the volume was so low it was more cost effective just to lump them in with the Pilot RBMs than to have a separate pickup. There is no way to separate the inventories of these properties from the Pilot. The manifest will be included in the SSCR for each property.
- Group 3 Independent: The RBMs for these properties were removed and taken to the JKS warehouse for a single pick-up. A detailed inventory for these properties will be included in the individual SSCRs as well as a copy of the bulk pick-up manifest.
- Group 4 Not Required: The RBMs for these properties were removed prior to Kiewit taking possession of the property. This will be clarified in each individual SSCR for these properties.
- Group 5 AP-122: The RBMs for these properties were taken to AP-122. The reason for this, is that the volume was so low it was more cost effective just to lump them in with the RBMs at AP-122 than to have a separate pickup. An inventory for these properties were taken and will be included in the SSCR along with the RBM manifest.

An indication as to whether or not RBMs were removed will be found in the "Closeout Letter" portion of each SSCR; any additional notes or details will be found in the "Materials Summary" portion. Please reach out to us if you need any further clarification.



Stephen P. DiNardo

Director of Quality Management, JKS Industries

Regulated Building Material Groupings and Aconex Close Out #

Revision Date

2/11/2019

##	Parcel #	Site Address	RBM Groupings					Close Out Documents
			Group 1 Independent	Group 2 Pilot	Group 3 JKS	Group 4 Not Required	Group 5 AP-122	SSCR Aconex #
1	AP-8	4618 High St.			Complete			C70-JKS-ENV-RPT-000014
2	AP-14	4617/4625 Race St.			Complete			Not Demo'd
3	AP-23	4639 Vine St.				Not Required		C70-JKS-PRM-RPT-000012
4	AP-28	4646 Vine St.			Complete			C70-JKS-ENV-RPT-000011
5	AP-33	4637 Claude Ct.		Complete				C70-JKS-ENV-RPT-000002
6	AP-34	4639 Claude Ct.		Complete				C70-JKS-ENV-RPT-000003
7	AP-42	4620 Claude St.				Not Required		C70-JKS-ENV-RPT-000004
8	AP-49	2381 E. 46th Ave.			Complete			C70-JKS-ENV-RPT-000023
9	AP-49A	2381 E. 46th Ave.			Complete			C70-JKS-ENV-RPT-000018
10	AP-53	4608 Josephine			Complete			C70-JKS-ENV-RPT-000015
11	AP-68	4601 Clayton					Complete	SSCR in Process; Due 2/18
12	AP-66	2615 E. 46th	Complete					C70-KIE-ENV-RPT-000004
13	AP-69	4611 Clayton			Complete			SSCR in Process; Due 2/18
14	AP-70	4621 Clayton			Complete			C70-JKS-ENV-RPT-000008
15	AP-72	4550 Clayton			Complete			C70-JKS-ENV-RPT-000021
	AP-72A	2716 E 46th Ave			Complete			C70-JKS-ENV-RPT-000019
16	AP-73	4600 Clayton				None Found		SSCR in Process; Due 2/18
17	AP-74	4610 Clayton				None Found		C70-JKS-ENV-RPT-000025
18	AP-75	4620 Clayton			Complete			C70-JKS-ENV-RPT-000009
19	AP-77	4615 Fillmore			Complete			C70-JKS-ENV-RPT-000012
20	AP-78	4625 Fillmore			Complete			C70-JKS-ENV-RPT-000016
21	AP-79	4605 Fillmore			Complete			C70-JKS-ENV-RPT-000017
22	AP-80	4610 Fillmore			Complete			C70-JKS-ENV-RPT-000024
23	AP-81	4620 Fillmore			Complete			C70-JKS-ENV-RPT-000020
24	AP-83	4625 Milwaukee			Complete			C70-JKS-ENV-RPT-000026
25	AP-86	3223 E. 46th Ave.	Complete					C70-JKS-ENV-RPT-000007
26	AP-86B	3455 E. 46th Ave.	Complete					C70-JKS-ENV-RPT-000005
27	AP-93	3538 E 46th Ave				No Survey		On Hold till 2020
28	AP-93A	3600 E 46th Ave Office				No Survey		On Hold till 2020
29	AP-102	4625 Colorado Blvd	Complete					Not Demo'd
30	AP-109E	5125 E. Stapleton N. Dr.	Complete					Demolition in Process
31	AP-109W	5175 E. Stapleton N. Dr.	Complete					Demolition in Process
32	AP-122	5601 E. Stapleton N. Dr.					Complete	On Hold till 2020
33	AP-185	4542 Filmore			Complete			C70-JKS-ENV-RPT-000010
34		Pump House						C70-JKS-ENV-RPT-000013

Group Details:

Group 1: Each property will have it's own individual RBM manifest

Group 2: RBMs from these properties went to the Pilot (AP-86) and will be on the Pilot Manifest

Group 3: RBMs for these properties were picked up in bulk. Refer to materials summary for detail on the actual RBMs removed for each property

Group 4: RBMs for these properties were either removed by Kiewit ("Not Required"), none were found ("None Found"), or the survey has not been released yet ("No Survey")

Group 5: RBMs from these properties went to AP-122 and will be on the manifest for AP-122

WASTE BILL OF LADING & CERTIFICATE OF RECYCLING		P/U Fees: \$25 \$30 \$40 \$45 \$55	BOL#: 27201
<input checked="" type="checkbox"/> Universal Waste	4' Jumbo ___ 4' Box ___ 8' Jumbo ___ 8' Box ___	\$65 ___ \$75 ___ \$85 ___ \$95 ___ \$105 ___	Shipment Date: 11/6/18
<input type="checkbox"/> TSCA Waste	HID Box ___ Battery Box ___ 6.5 Gallon Pail ___	\$115 ___ \$125 ___ \$135 ___ \$145 ___ \$155 ___	
<input type="checkbox"/> Special Waste	14-G PD ___ 30-G PD ___ 55-G PD ___ CY Bx ___	Labor Charges: \$ ___	Emergency Contact (877) 331-2149 Extension 4
Generator Of Waste:	95-G PD ___ 55-G SD ___ 85-G SD ___ GL Box ___	Off Spec. Charge: \$ ___	
Name:	Bill To: <u>TKS Inc</u>	Name: <u>TKS Industries</u>	
Address:	Address: <u>747 Sheridan Blvd.</u>	Address: <u>747 Sheridan Blvd.</u>	
City, State, Zip:	City, State, Zip: <u>Lakewood Co. 80214</u>	City, State, Zip: <u>Lakewood Co. 80214</u>	
Contact:	Contact: <u>Jeff Knight</u>	Contact: <u>Jeff Knight</u>	
Phone:	Phone: <u>720-462-4410</u>	Phone: <u>720-462-4410</u>	
Fax:	Fax:	Fax:	
PO#	PO#	PO#	
Job#	Job#	Job#	

WASTE BROKERAGE FACILITY:	EPA ID#: COR000231449
<input checked="" type="checkbox"/> R8E, LLC	Destination Facility for Universal Waste
4810 Newport Street	Large Quantity Handler of Universal Waste
Commerce City Colorado 80033-2244	Hazardous Waste Transporter/Transfer Facility
(p) 303-424-4887 (f) 303-424-9193	Used Oil Transporter/Transfer Facility
Email: Mike@R8Enviro.com	US DOT #: 050108 550 051Q HMP-20746
www.R8Enviro.com	US DOT #1781660 CO TSCA - EPA Approved PCB Handler

Container	Waste Common Name	DOT Description	Total Quantity	Unit / Wt. Volume
2 CF	4' & UNDER FLUORESCENT LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))		
	5' & OVER FLUORESCENT LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))	12	ea
	UTUBE FLUORESCENT LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))		
1 CF	CIRCULAR FLUORESCENT LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))		
	COMPACT FLUORESCENT LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))	49	ea
	HID MERCURY/HALIDE/SODIUM LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))	21	ea
	SHIELD/COATED/GROOVED LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))		
	INCANDESCENT LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))	36	ea
	UV/ARC/IGNITRON LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))		
	BROKEN LAMP/S RECYCLING	Non-DOT Regulated (per 49 CFR 173.164(e))		
	CRUSHED FLUORESCENT LAMP/S RECYCLING (processed)	Non-DOT Regulated (per 49 CFR 173.164(e))		
	PCB WASTE RECYCLE/INCINERATION/MICROENCAP	RQ, UN3432, Polychlorinated biphenyls, Solid, 9, PGIII, ERG#171		
	NON-PCB BALLAST RECYCLE/MICROENCAPSULATION	Non-RCRA / Non-DOT Regulated Waste		
	ESCRAP RECYCLING	Non-DOT Regulated	110	P
	MERCURY DEVICE RECYCLING	UN3506, Mercury Contained in Manufactured Articles, 8 (6.1), PGIII, ERG#172		
	LEAD ACID BATTERY RECYCLING	UN2794, Batteries, Wet Filled w/ Acid, 8, PGIII, ERG#154		
	ALKALINE BATTERY RECYCLING	Batteries, Dry, sealed, n.o.s. Specail Provision 130		
	NICKEL (Ni-Cad) BATTERY RECYCLING	Batteries, Dry, sealed, n.o.s. Specail Provision 130		
	LITHIUM METAL BATTERY RECYCLING - DOT 173.185(d)	UN3090, Lithium Batteries, 9, PGII, ERG#138		
	LITHIUM Ion BATTERY RECYCLING - DOT 173.185(d)	UN3480, Lithium Batteries, 9, PGII, ERG#138		
	WASTE OIL RECYCLING	Special Waste Liquid	1	GAZ
	WASTE GLYCOL RECYCLING	Special Waste Liquid		
71 GALLON	WASTE AEROSOLS	UN1950, Aerosols, Flammable, 2.1, ERG#126		
	WASTE LATEX PAINT	Special Waste Liquid	71	GAZ
	LOW RADIATION CONTAINING SMOKE DETECTORS	Special Waste Solid, Nuclear Regulatory Law 10 CFR 32.37		
	FIRE EXTINGUISHER(S)	Special Waste Solid		
	METALS RECYCLING	Special Waste Solid		
	MISCELLANEOUS RECYCLING <u>3 MICROWAVES</u>			
	MISCELLANEOUS RECYCLING <u>6 Large Fridges</u>		6	ea

Generator Certification: This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. Unpaid invoices will be assigned to a licensed Collection Agency and subject to Collection Agency Fee's, Attorney's Fee's, Court Costs and Interest.

Signature: <u>[Signature]</u>	Title: <u>Operator</u>	Print Name: <u>Jesus Casado</u>	Date: <u>11-6-18</u>
Transporter 1 Name: <u>Jesus Casado</u>	Transporter 2 Name: _____	Phone Number: <u>720-245-1685</u>	Phone Number: _____
Signature: <u>[Signature]</u>	Date: <u>11-6</u>	Signature: _____	Date: _____

Receiving, subject to the classification and regulations in effect on the date of issue of the Bill of Lading, the property described above is in apparent good order. Please retain a copy of this document as the "Certification of Recycling" for the items and quantities listed above.

Signature: [Signature] Date: 11/6/18

10. Weight Tickets

10a. Daily Load Trackers and Associated Truck Tickets

CHACON'S

construction & transport



No. 8544

2920 W. 73rd Ave.
Westminster, CO 80030
Fax 303-331-8259
PH 720-357-1448

BILL TO: **J K S**

DISPATCHED BY:

DATE: **12/17/18**

JOB DESCRIPTION:

TRUCK # **CH 376**

I-70

TANDEM TRAILER

MATERIAL **DEMO**

	LOADS	UNLOADS
JOB#	1	AP - 49
LOAD AT	2	AP - 49
46+1	3	AP - 49
York ST		
UNLOAD AT		
D.A.D.S		
RATE \$		
HOURLY <input type="checkbox"/> TONMILE <input type="checkbox"/>		
START TIME 7:30 AM		
STOP TIME 4:30 PM		
TOTAL HOURS		
9 hrs		

OWNER OF TRUCK:

DRIVER'S NAME

M.R.C.A.

AUTHORIZED SIGNATURE

[Signature]

Net due 30 days from date of this statement. Past due accounts bear interest at 1.5% per month. In the event collection of this account becomes necessary, client agrees to pay all costs and reasonable attorney fees.

CHACON'S

construction & transport



No. 8546

2920 W. 73rd Ave.
Westminster, CO 80030
Fax 303-331-8259
PH 720-357-1448

BILL TO: JKS

DISPATCHED BY:

DATE: 12-17-18

JOB DESCRIPTION:

TRUCK # S-23

TANDEM TRAILER

I-70

MATERIAL Demo

LOADS

UNLOADS

JOB# AP-49

1111

LOAD AT

46th York St

UNLOAD AT

D.A.D.S
Landfill

RATE \$

HOURLY TONMILE

START TIME 7:30^{am}

STOP TIME 4:30^{PM}

TOTAL HOURS

9 ✓

OWNER OF TRUCK:

Scoby

DRIVER'S NAME

AUTHORIZED SIGNATURE

Paul Salas

Charles J St

Net due 30 days from date of this statement. Past due accounts bear interest at 1.5% per month. In the event collection of this account becomes necessary, client agrees to pay all costs and reasonable attorney fees.

10b. Waste Weight Tickets



Denver Arapahoe Disposal
 3500 S Gun Club , PO Box 460397
 Aurora, CO, 80018
 Ph: (720) 876-2620

2469956

Original
 Ticket# 3280996

Customer Name JKSINDUSTRIESLLC JKS Industri Carrier JKS INDUSTRIES JKS INDUSTRIES
 Ticket Date 12/17/2018 Vehicle# 1 Volume
 Payment Type Credit Account Container
 Manual Ticket# Driver
 Hauling Ticket# Check#
 Route Billing # 0014925
 State Waste Code Gen EPA ID
 Manifest Grid
 Destination
 PO
 Profile ()
 Generator

Time	Scale	Operator	Inbound	Gross	2 lb*
In 12/17/2018 07:07:27	MANUAL WT	aramirez		Tare	1 lb*
Out 12/17/2018 07:07:27		aramirez		Net	1 lb
		* Manual Weight		Tons	

Comments 13 loads for central 70 project = 234 cyds total for loads 12/17/18



PLEASE MAKE SURE YOUR TICKET IS CORRECT BEFORE SIGNING.

Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1 CDY-CONST DEBRIS - 100		234.00	Yards				

Total Fees
 Total Ticket

Driver ^{402WM-N} Signature



Date: 12-17-18

Ticket#: AP49A

ACCT#:306-14925

JKS INDUSTRIES
CENTRAL 70 PROJECT

CDY 18 YDS ✓ 25 YDS HIGHSIDES _____

DISPOSAL SITE: DADS
3500 S GUN CLUB RD
AURORA CO 80018

DRIVER:

Signature: M.A. CH

Date: 12-17-18

Ticket#: AP 49A

ACCT#:306-14925

JKS INDUSTRIES
CENTRAL 70 PROJECT

CDY 18 YDS ✓ 25 YDS HIGHSIDES _____

DISPOSAL SITE: DADS
3500 S GUN CLUB RD
AURORA CO 80018

DRIVER:

Signature: [Signature]

Date: 12-17-18

Ticket#: AP 49 A

ACCT#:306-14925

JKS INDUSTRIES
CENTRAL 70 PROJECT

CDY 18 YDS 25 YDS HIGHSIDES _____

DISPOSAL SITE: DADS
3500 S GUN CLUB RD
AURORA CO 80018

Signature: _____ DRIVER
[Handwritten Signature]

Date: 12-17-18

Ticket#: AP-49A

ACCT#:306-14925

JKS INDUSTRIES
CENTRAL 70 PROJECT

CDY 18 YDS 25 YDS HIGHSIDES _____

DISPOSAL SITE: DADS
3500 S GUN CLUB RD
AURORA CO 80018

Signature: _____ DRIVER:
[Handwritten Signature]

13 loads x 18 = 234 Yds
total

11. Dump Diversion Summary

JKS Industries
AP-49A: 2381 E 46th Ave

Descriptions		Dump Diversion / Recycle %								
Phase	Activity	Unit of Measure	# of Yards per Container	# of Containers	Total Number of Yards	Pounds Per Yard **	Total Lbs	Recycled Yes/No	Pounds of Recycle or Dump Diversion	% of Recycle or Dump Diversion
Abatement	Trash Rolloff	Cubic Yard	-	-	-	450.00	-			
Abatement	Asbestos Containers	Cubic Yard	-	-	-	500.00	-			
Demolition	Demolition Construction Debris	Cubic Yard	18	4	72.00	1,400.00	100,800			
Demolition	Concrete Debris	Cubic Yard	12	-	-	4,050.00	-	x	-	0.00%
Demolition	Trees	Cubic Yard	-	-	-	500.00	-	x	-	0.00%
Demolition	Steel	Lbs	-	-	-	-	-	x	-	0.00%
Demolition	Copper	Lbs	-	-	-	-	-	x	-	0.00%
				4	72.00		100,800		-	0.00%

STUDY NOTES

- 1 The source material used for the Volume to Weight conversions came from Waste Management web site.
- 2 Conversions ratio's have been modified based on estimated compaction.

12. Containment Entry/Exit Log

JKS INDUSTRIES

CONTAINMENT SIGN-IN & SIGN-OUT SHEET

Job Name: AP-49

Job #: 18-320

Date: 10-25-16

set up - not getting in containment +

	NAME	SIGN-IN	SIGN-OUT	SIGN-IN	SIGN-OUT
1.	Ramira Duran	Ramira	N/A	N/A	N/A
2.	Jean Leccia	Jean Leccia	N/A	N/A	N/A
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

JKS INDUSTRIES

CONTAINMENT SIGN-IN & SIGN-OUT SHEET

Job Name: A1-49 -

Job #: 18-320

Date: 10-26-18

NAME	SIGN-IN	SIGN-OUT	SIGN-IN	SIGN-OUT
1. Martha Nahl				
2. Ramira Duran	Ramira Duran	N/A	N/A	N/A
3. Jean Leccia	Jean Leccia	7:30 a.m.		
4.				
5.				
6. Jean Leccia	7:30 a.m.	11:57	12:29	1:00
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

outside person

JKS INDUSTRIES

CONTAINMENT SIGN-IN & SIGN-OUT SHEET

Job Name:

Job #:

Date: 10-29-18

NAME	SIGN-IN	SIGN-OUT	SIGN-IN	SIGN-OUT
1. Ramira Duran	MP	N/P	N/A	teardown
2. Jean Leccia	MP	MP	MP	tear down
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

13. Daily Logs

